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WONDER

Story Annual

VOL. 1, NO. 1

A THRILLING PUBLICATION

1950 EDITION

A Full-Length Novel

THE ONSLAUGHT FROM RIGEL

by
FLETCHER PRATT

Invaders from a distant star struck Earth like a comet, and the remnants of humanity had to rise from the dust for battle! The survivors of a cataclysmic disaster, turned to metal, fight against grim, total extinction

5

Two Complete Novelets

THE ETERNAL MAN.....D. D. Sharp 116

Herbert Zulerich learned to live forever—but even the far future was not ready to benefit from his great gift!

THE ROBOT ALIENS.....Eando Binder 160

Mankind sought to destroy those strange beings who came out of the reaches of space—on their good will mission!

Short Stories

THE DERELICT OF SPACE...William Thurmond and Ray Cummings 140

Ronald Dealy's downfall came because of others' weaknesses

THE MOON DEVILS.....John Beynon Harris 149

Luna was considered a dead world until the message arrived

EXILES OF MARS.....Frank K. Kelly 184

Men of Earth and girls of the Red Planet face savage foes!

Features

TO SCIENCE FICTION READERS.....An Editorial 4

FROM A SCIENTIST'S NOTEBOOK...Science Facts 115

THE AGE OF CONVENIENCE...Simpson M. Ritter 159

To Science Fiction Readers



WONDER STORY ANNUAL is a big book for big stories—many of which proved their merit back in the days when science fiction was a new and exciting factor in the popular magazine world.

That it has stayed new and exciting is a great tribute to the men who conceived and wrote the stories you are about to read—for their work and that of the authors who have come along since has never lost its freshness and, we devoutly hope, never will.

But this ever-present newness in science fiction has caused veteran readers to lose track of older reading in the light of the enthralling stories which continue to appear in modern magazines. And it has given hundreds of thousands of later aficionados little time to delve back into the past.

Hence all too many of the pioneer stories and classics of the earlier era have been allowed to fall into the limbo of the forgotten. This despite the fact that in many of them the authors' concepts and ideas and inventions remain as far in the future today as when they first saw print.

Truly there were giants in those days—whose mighty strides have been blanketed only by the fact that giants still walk the realm of science fiction. It is our purpose to bring these "fathers of the Gods" back from their undeserved oblivion and restore them to their rightful thrones.

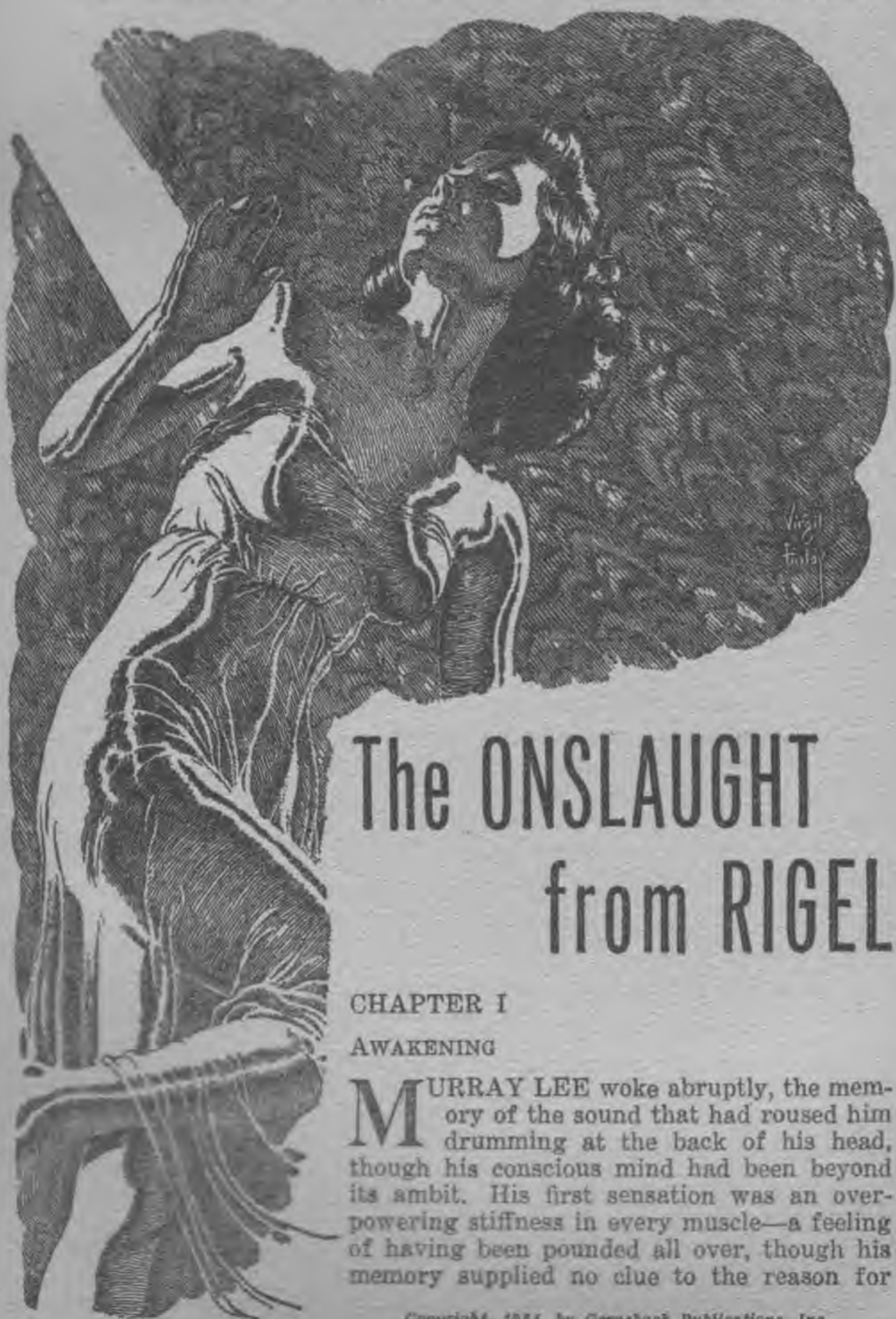
In view of the vast amount of material available in the old WONDER STORIES, and its subsidiaries, as well as the new THRILLING WONDER STORIES and STARTLING STORIES, the job of selecting the best is a monumental one. We believe we have broken the ice in this issue with a group of stories not only typical of the best of their era but stories that remain standouts today.

We shall welcome any outside assistance any of you care to give us in the form of suggestions as to stories you would like to see again—drawn from your memories, from hearsay, from yellowing files on a treasured shelf in your study. If you have any of these stories in mind, please let us know. We want to make WONDER STORY ANNUAL a new and fine yearly anthology of science fiction!

—THE EDITOR

A Novel by **FLETCHER PRATT**

Invaders from a distant star struck Earth like a comet—and the remnants of humanity had to rise from the dust for battle!



The ONSLAUGHT from RIGEL

CHAPTER I

AWAKENING

MURRAY LEE woke abruptly, the memory of the sound that had roused him drumming at the back of his head, though his conscious mind had been beyond its ambit. His first sensation was an overpowering stiffness in every muscle—a feeling of having been pounded all over, though his memory supplied no clue to the reason for

The Survivors of a Cataclysmic Disaster,

such a sensation. Painfully he turned over in bed and felt the left elbow where the ache seemed to center. He received the most tremendous shock of his life.

The motion was attended by a creaking clang and the elbow felt exceedingly like a complex wheel.

He sat up to make sure he was awake, tossed the offending arm free of the covers. The motion produced another clang and the arm revealed itself to his astonished gaze as a system of metal bands, bound at the elbow by the mechanism he had felt before and crowned, where the fingers should be, by steely talons terminating in rubber-like fingertips. Yet there seemed to be no lack of feeling in the member.

For a few seconds he stared, open-mouthed, then lifted the other arm. It was the right-hand counterpart of the device he had been gazing at. He essayed to move one, then the other—the shining fingers obeyed his thought as though they were flesh and blood.

A sense of expectant fear gripped Lee as he lifted one of the hands to unbutton his pajamas. He was not deceived in his half-formed expectation—where the ribs clothed in a respectable amount of muscle should have been, a row of glistening metal plates appeared. Thoughts of body-snatching and bizarre surgery flitted through his mind to be instantly dismissed.

Dreaming? Drunk? A dreadful idea that he might be insane struck him and he leaped from the bed to confront a mirror. His feet struck the floor with a portentous bang and each step produced a squeak and clank—and he faced the mirror, the familiar mirror before which he had shaved for years. With utter stupefaction he saw an iron countenance above which a stiff brush of wire hair projected ludicrously.

One does not go mad at such moments. The shock takes time to sink in. "At all events I may as well get dressed," he remarked to himself practically. "I don't suppose water will do this hardware any good, so I'll omit the bath. But if I'm crazy I might as well go out and have a good time about it."

Dressing was a process prolonged by an examination of himself and the discovery that he was a most efficient metal machine. He rather admired the smoothness of the hip joints and the way the sliding parts of his arms fitted together, was agreeably surprised to find that in the metalizing process his toes had become prehensile. Just for the fun of it he pulled one shoe on with the opposite foot.

IT WAS not until Murray Lee was nearly dressed that he realized that the wonted noise of New York, which reached as a throaty undertone to the forty-eighth story of the modern apartment building, was somehow absent. Surely at this hour—he glanced at the clock. It had stopped at a quarter to two. No help there. His watch was inexplicably missing. Probably Ben had borrowed it.

That was the idea. Ben Ruby, with whom he occupied the duplex apartment in the penthouse of the Arbuckle Building, was a scientist of sorts—mainly engaged in the analysis of gland extract samples for millionaires distrustful of their rejuvenators these days—he would be able to explain everything.

He stepped across to the door and dropped the brass knocker, a little timorous at the sound of his own thudding steps. The door was snatched open with unexpected suddenness by a caricature of Ben in metal—as complete a machine as himself but without most of his clothes.

Turned to Metal, Fight Total Extinction!

"Come in! Come in!" his friend bellowed in a voice with an oddly phonographic quality to it. "You look great. Iron Man MacGinnity! What did you put on clothes for? As useful as pants on a rock-drill. I have breakfast."

"What is it? Am I crazy—are

Nize machinery, ate oop all de axle-grease. You need oil. Stick around."

Ben Ruby disappeared into the bowels of the apartment, the sound of his footsteps ringing enormous in the vast silence. In an instant he was back with a radio battery in one hand and an oil-can in the other.



Yoshio was snatched into the air (CHAP. VI)

you—or are we both?" Lee asked.

"Of course not. Greatest thing that ever happened. The big comet. They said she was radioactive but most of 'em wouldn't believe it. Now look what it did." Murray Lee remembered vaguely some newspaper palaver about a giant comet that was going to strike the earth—argument and counter-argument as to whether it would have a serious effect.

"Everybody's turned to metal.

"Sorry, no grease on tap," he remarked briskly. "Typewriter oil." He went to work busily, squirting

drops of oil into Lee's new metallic joints. "Connect this thing up yourself. It fills you with what it takes." He indicated the battery with an extended toe. "One arm and the opposite leg. There seems to be a resistance chamber in us somewhere that collects the juice."

Without in the least understanding what it was all about Murray Lee made shift to follow his instruction.

It was the most singular meal he had ever partaken of but he found it curiously invigorating.

"How about another? No? Have you seen anybody else? It finished most of them."

"Will you sit down and tell me consecutively what it's all about before I bash you?" asked Murray, petulantly. "Being turned into a machine is not the easiest thing in the world on one's temper. It upsets the disposition."

"Some sort of a special extra-radioactive gas-storm connected with the comet, I think, though I can't be sure. It's made machines of all of us, now and forever more. We'll live on electric current after this and won't have to bother about little things like doctors if we can find a good mechanic. But it killed a lot of people. Come along, I'll show you."

His hand rang on Murray's arm as he grasped it to lead the way. The hall was portentously dark and Ben pulled him straight across it to the door marked *Fire Exit*.

"Elevator?" queried Murray.

"No go. No power."

"Oh, Lord, forty-eight stories to walk."

"You'll get used to it." They were clanking to the landing of the floor below and Ben, without the slightest compunction, pushed boldly into the door of the apartment there. The lock showed signs of being forced.

"Oh, I broke it in," Ben answered Murray's unspoken query. "Thought I might be able to help, but it was no use. That fat woman lives here—you know, the one that used to

sniff at us in the elevator when we went on a bender."

ANY qualms Murray felt about looking on the naked face of death were perfunctorily laid to rest as the scientist led him into the room occupied by the late lady of the elevator. She lay solidly in her bed amidst the meretricious gorgeousness she had affected in life, the weight of her body sagging the bed grotesquely toward its center. Instead of the clean-running mechanical devices which marked the appearance of the two friends, she was nothing but lumps and bumps, a bulging ugly cast-iron statue, distending the cheap "silk" nightdress.

"See?" said Ben, calmly. "The transmutation wasn't complete. Prob'ly didn't get it as strong as we did. Look, the window's closed. This will be a warning to people who are afraid to sleep in a draft. Come along."

Murray lingered. "Isn't there anything we can do?" He felt uncomfortably responsible.

"Not a thing," said Ben, cheerfully. "All she's good for is to stand in the park and look at. Come along. We've got a lot of stairs to go down. We're too noisy—need a good bath in non-rusting oil."

They reached the street level after an aeon of stairs, Ben leading the way to the corner drug store. All about them was a complete silence. Fleecy white clouds sailed across the little ribbon of blue visible at the top of the canyon of the New York city street.

"Lucky it's a nice day," said Ben, boldly stepping into the drug store, the door of which stood open. "We'll have to figure out this rainy weather thing. It's going to be a problem."

Within, the drug store presented the same phenomena of arrested development as the apartment of the fat lady at the forty-seventh story. A cast-iron statue of a soda-clerk leaned on the fountain in an attitude of studied negligence, its lips parted

as though addressing some words to the equally metallic figure of a girl which faced him across the counter. On her steely features was a film of power and the caked and curling remains of her lipstick showed she had been there for some time.

"By the way," Murray asked, "have you any idea what day it is, and how long we were—under the influence? It couldn't have happened overnight."

"Why not?" came Ben's voice from the rear of the store. "Say, old dear, rummage around some of those drawers for rubber gloves, will you? I'd hate to run into high voltage with this outfit."

"Here they are," said Lee. "Let's go. What's the next step?" They were outside.

"Rubber shoes, I fancy," said Ben as his feet skidded on the pavement. "Let's take a taxi there and go find a shoe store."

Together they managed to slide the cast-iron taxi driver from his seat (Murray was surprised at how easily he was able to lift a weight he could not have budged in his flesh-and-blood days), deposited him on the curb and climbed in. The key was fortunately in the switch.

As they swung around the corner into Madison Avenue Lee gave an exclamation. A scene of ruin and desolation met their eyes. Two or three buses had telescoped and an auto or so had piled into the wreckage. All about were the iron forms of the passengers in these conveyances, frozen in the various attitudes they had assumed at the moment of the change, and from one or two of them thin streamers of metal showed where blood had flowed forth before it had been irretrievably crystallized to metal.

Murray Lee suddenly realized that an enormous amount of machinery had gone to smash everywhere when the guiding hands had been removed and the guiding brains frozen to useless metal. He gave a little shudder.

They swung round before a shoe store with grating brakes. The door was locked but Ben, lifting his foot, calmly kicked a hole in the show window. Murray extended a restraining hand but his friend shook it off.

"No use asking permission. If the proprietor of this place is still alive anywhere it will be easy enough to settle up for the damage. If he isn't we have as good a right to it as anybody."

The new toes, which appeared to be longer than those he remembered, made fitting a difficulty and Murray split two or three shoes before he got a pair on.

"What next?" he asked. "I feel like a drink."

"No use," said Ben. "You're on the wagon for good. Alcohol would play merry hell with your metal-work. The best thing is to find out how many people we are. For all we know we're the only ones in the world. This thing seems to have knocked out everybody along the street level. Let's try some of the taller apartment buildings and see if we can find more penthouse dwellers."

"Or maybe the others came to before us and went away," said Murray.

"True," Ben said. "Anyhow, look-see." He led the way to the taxi.

"Wait," said Murray. "What's that?"

OVER the sound of the starting engine came the echo of heavy footsteps, muffled by shoes.

"Hey! This way!" shouted Ben. The footsteps tentatively approached the corner. Murray ran forward, then stopped in amazement. The newcomer was a girl—or would have been a girl had she not been all metal and machinery like themselves. To his eyes, still working on flesh-and-blood standards, she was anything but good-looking. She was fully and formally dressed, save that she wore no

hat—the high pile of tangled wire that crowned her head made this obviously impossible.

"Oh, what has happened?" she cried at them. "What can I do? I took a drink of water and it hurt."

"Everything's all right. Just a little metal transformation," said Ben. "Stick around, I'll get you some oil. You squeak." He was off down the street in a clatter, leaving Murray with the girl.

"Permit me to introduce myself," he said. "I am—or was—Murray Lee. My friend, who has gone to get you some oil, is Benjamin Franklin Ruby. He thinks the big comet which hit the earth contained radioactive gas that made us all into metal. Did you live in a penthouse?"

She eyed him darkly. "Somebody told you," she said. "I'm Gloria Rutherford and we have the top floor of the Sherry-Netherland but all the rest were away when this happened. Pardon me, it hurts me to talk."

THERE came a crash from down the street, indicating that Ben was forcing another store, and in a minute he was back with a handful of bottles. With a flourish he offered one to the girl.

"Only castor, but it's the best the market affords," he said. "What we need is a good garage but there aren't many around here. Go ahead, drink her down, it's all right," he assured the girl, who was contemplating the bottle in her hand with an expression of distaste.

Following his own recommendation he tipped up one of the bottles and drank a deep draught, then calmly proceeded to douse himself head to foot with the remainder.

Gloria made a little grimace, then tried it. "Thank you," she said, setting the bottle down. "I didn't think it was possible anybody could like the stuff except in a magazine ad. Now tell me, where are all the other people and what do we do?"

"Do?" asked Ben. "Find 'em. How?

Ask Mr. Foster. Anybody else in your neck of the woods?"

She shook her head. Murray noticed that the joints of her neck rattled. "Paulson—that's my maid—was the only other person in our apartment and she seems to be even more solid-iron in the head than usual—like this lot." She swung her hand round in an expressive gesture toward the image of a policeman, which was directing two similar images to pause at the curb.

"How about a bonfire?" suggested Murray. "That's the way the Indians or South Africans or somebody attract attention."

"What could we burn?" asked Ben. "A building, of course. Why not? Property doesn't mean anything any more with all the property owners dead."

"I know," said Gloria, falling into the spirit of his suggestion. "The old Metropolitan Opera House. That eyesore has worried me for the last five years."

The suggestion was endorsed with enthusiasm. They climbed into the taxi and twenty minutes later were hilariously kindling a blaze in the back-stage section of the old building, running out of it with childish delight to watch the pillar of smoke grow and spread as the flames caught the timbers, long dry with age.

Murray sighed as they sat on the curb across the street. "This is the only time I've ever been as close as I wanted to be to a big fire," he complained. "And now there isn't even a policeman around for me to make faces at. But such is life!"

"What if it sets fire to the whole city?" asked Gloria.

Ben shrugged. "What if?" he replied. "Doesn't mean anything. Bet there aren't more than a couple of dozen people alive. But I don't think it will. Modern construction in most of these places is too fireproof."

"Look, there's a bird," said Gloria, indicating a solid metal pigeon, fixed like the human inhabitants of the



There was a thought-experiment on the elephant-man's hand (CHAP. XXIV)

city in his last position in life at the edge of the curb. "By the way, what do we eat? Do we live on castor oil all the time?"

CHAPTER II

A METAL COMMUNITY

THE conversation turned into a discussion of the possibilities of their new form. Whether they would need sleep was a moot point and they were discussing the advisability of training mechanics as doctors when the first footsteps announced themselves.

They belonged to a man whose face, ornamented by a neat Van Dyke in wire, gave him the appearance of a physician of the more fleshly life, but who turned out to be a lawyer named Roberts. He was delighted with the extraordinary youthfulness and vitality he felt in the new incarnation.

Fully dressed in morning clothes he bore the information that he was one of a group of four who had achieved the metal transformation atop the French building. He promptly plunged into a discussion of technicalities with Ben that left the other two out of it and they moved off to the Seventh Avenue side of the building to see whether any more people were visible.

"Do you miss the people much?" asked Murray by way of making conversation.

"Not a bit," Gloria confessed. "My chief emotion is delight over not having to go to the de la Poers' tea tomorrow afternoon. Though I suppose we will miss them as time goes on."

"I don't know about that," Murray said. "Life was getting pretty complicated and artificial—at least for me. There were so many things one had to do before one began living—you know, picking the proper

friends and all that."

Gloria nodded. "I know what you mean. My mother would throw a fit if she knew I were here talking to you right now. If I met you at a dance in Westchester it would be perfectly all right for me to stay out with you half the night and drink together. But meeting you in daylight on the street—oh, boy!"

"Well," Murray sighed, "that tripe is all through with now. What do you say we get back and see how the rest are getting along?"

They found them still in the midst of their argument.

"—evidently some substance so volatile that the mere contact with animal tissue causes a reaction that leaves nothing of either the element or the tissue," Ben was saying. "You note that these metal bands reproduce the muscles almost perfectly."

"Yes," the lawyer replied, "but they are too flexible to be any metal I know of. I'm willing to grant your wider knowledge of chemistry but it doesn't seem reasonable. All I can think of is that some outside agency has interfered. These joints, for instance"—he touched Ben's elbow,—"and what about the little rubber pads on your fingers and toes and the end of your nose?"

There was a universal motion on the part of the others to feel of their noses. It was as the lawyer had said—they were, like the fingers and toes, certainly very much like rubber—and movable!

"Don't know," said Ben. "Who did it, though? That's what boggles your scheme. Everybody's changed to metal and nobody left to make the changes you mention. However, let's go get the rest of your folks. I wonder if we ought to have weapons. You two wait here."

He clanked off the lawyer to the taxi. A moment later the tooting of the horn announced their return. The party consisted, beside Roberts himself, of his daughter Ola Mae, a girl of sixteen, petulant over the fact that her high-heeled shoes were

already breaking down under her weight—a Japanese servant named Yoshio—and Mrs. Roberts, one of those tall and billowy women of the earlier life who, to the irritation of the men, turned out to be the strongest of any of them. Fat, apparently, had no metallic equivalent, and her ample proportions now consisted of bands of metal that made her extraordinarily powerful.

With these additions the little group adjourned to Times Square to watch the billowing clouds of smoke rising above the ruins of the opera house.

"What next?" asked Gloria, seating herself on the curbstone.

"Look for more people," said Murray. "Surely we can't be the only frogs in the puddle."

"Why not?" said Ben, argumentatively, with a swing of his arm toward the wreckage-strewn square. "You forget that this catastrophe has probably wiped out all the animal life of the world and we seven owe our survival to some fortunate chance."

The Japanese touched him on the arm. "Perhaps sir can inform inquirer, in such case, what is curious avian object?" he said, pointing upward.

They heard the beat of wings as he spoke and looked up together to see, soaring fifty feet past their heads a strange parody of a bird with four distinct wings, a long feathered tail and bright intelligent eyes set in a dome-like head.

There was a moment of excited babbling.

"What is it?"

"Never saw anything like it before."

"Did the comet do *that* to chickens?" And then, as the strange creature disappeared among the forest of spires to the east, the voice of the lawyer, used to such tumults, asserted its mastery over the rest.

"I think," he said, "that whatever that bird is the first thing to be done is find a headquarters of some kind

and establish a mode of life."

"How about finding more people?" asked Gloria. "The more the merrier—and there may be some who don't know how nice castor oil is." She smiled a metallic smile.

"The fire—" began Ben.

"It would keep some people away."

They debated the point for several minutes, finally deciding that since those present had all come from the top floors or penthouses of tall buildings the search should be confined to such localities. Each was to take a car—there were any number for the taking around Times Square—and cover a certain section of the city, rallying at sundown at the Times building, where Ola Mae and Murray, who could not drive, were to be left.

ROBERTS was the first one back, swinging a big Peugeot around with the skill of a racing driver. He had found no one but had a curious tale. In the upper floors of the Waldorf three of the big windows were smashed and in one corner of the room, amid a maze of chairs fantastically torn as though by a playful giant, was a pile of soft cloths.

In the midst of this pile, four big eggs reposed. He had picked up one of the eggs and, after weighing the advisability of bringing it with him, decided he had more important things to do. The owners of the nest did not appear.

As he emerged from the building, however, the quick motion of a shadow across the street caused him to look up in time to catch a glimpse of one of the four-winged birds they had seen before and just as he was driving the car away his ears were assailed by a torrent of screeches and "skrawks" from the home-comer. He did not look up until the shadow fell across him again when he perceived the bird was following close behind him, flying low and apparently debating the advisability of attacking him.

Roberts waved his arms and shouted. It had not the slightest effect on the bird, which, now that it was closer, he perceived to be moving its hind wings along, holding its fore-wings out like those of an airplane. He had wished for a weapon of some kind. Lacking one, he drew the car up to the curb and ran into a building.

The bird alighted outside and began to peck the door in but by the time it got through Roberts had climbed a maze of stairs. Though he could hear it screaming throatily behind him it did not find him and eventually gave up the search.

The end of this remarkable tale was delivered to an enlarged audience.

Gloria had arrived, bringing a chubby little man who announced himself as F. W. Stevens.

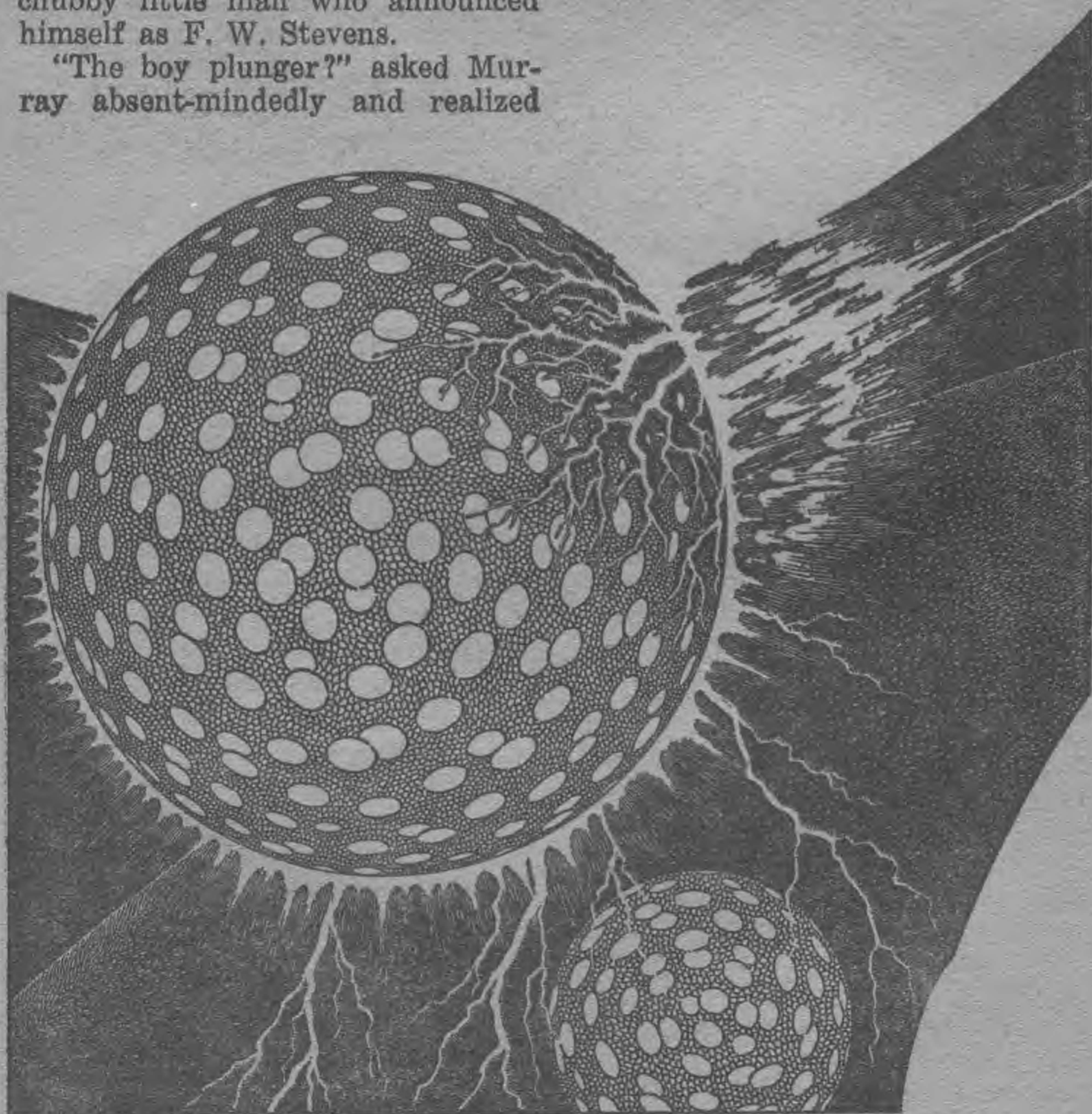
"The boy plunger?" asked Murray absent-mindedly and realized

from Gloria's gasp that he had said the wrong thing.

"Well, I operate in Wall Street," Stevens replied rather stiffly.

Ben came with three recruits. At the sight of the first Murray gasped. Even in the metal caricature, he had no difficulty in recognizing the high bald forehead, the thin jaws and tooth-brush moustache of Walter Beeville, greatest living naturalist.

Before dark the others were back—Yoshio with one new acquisition and Mrs. Roberts, whose energy paralleled her strength, with no less than four, among them an elaborately gowned woman who proved to be Marta Lami, the Hungarian dancer who had been the sensation of New York at the time of the catastrophe.



As the Monitors
plunged in, long
yellow rays shot
forth from the
green globes
(CHAP. XXII)



They gathered in the Times Square drug store in a strange babble of phonographic voices and clang of metal parts against the stone floor and soda fountains. It was Roberts who secured a position behind one of these erstwhile dispensers of liquid soothing-syrup and rapped for order.

"I think the first thing to be done," he said when the voices had grown quiet in answer to his appeal, "is to organize the group of people here and search for more. If it had

not been for the kindness of Mr. Ruby here, my family and I would not have known about the necessity of using oil on this new mechanical makeup nor of the value of electrical current as food. There may be others in the city in the same state. What is the—ah—sense of the gathering on this topic?"

Stevens was the first to speak. "It's more important to organize and elect a president," he said.

"A very good idea," commented Roberts.

"Well then," said Stevens ponderously, "I move we proceed to elect officers and form a corporation."

"Second the motion," said Murray almost automatically.

"Pardon me." It was the voice of Beeville the naturalist. "I don't think we ought to adopt any formal organization yet. It hardly seems

necessary. We are practically in the golden age, with all the resources of an immense city at the disposal of—fourteen people. And we know very little about ourselves. All the medical and biological science of the world must be discarded and built up again.

"At this very moment we may be suffering from the lack of something that is absolutely necessary to our existence—though I admit I cannot imagine what it could be. I think the first thing to do is to investigate our possibilities and establish the science of mechanical medicine. As to the rest of our details of existence, they don't matter much at present."

A MURMUR of approval went round the room and Stevens looked somewhat put out.

"We could hardly adopt anarchy as a form of government," he offered dubiously.

"Oh, yes, we could," said Marta Lami. "Hurray for anarchy. The Red Flag forever. Free love, free beer, no work!"

"Yes," said Gloria, "what's the use of all this metalizing, anyway? We got rid of a lot of old applesauce about restrictions and here you want to tie us up again. More and better anarchy!"

"Say," came a deep and raucous voice from one of the newcomers. "Why don't we have just a straw boss for a while till we see how things work out? If anyone gets fresh the straw boss can jump him or kick him out but those that stick with the crowd have to listen to him. How's that?"

"Fine," said Ben, heartily.

There was a clanging round of metallic applause as three or four people clapped their hands.

"There is a motion—" began Roberts.

"Oh, tie a can to it," said Gloria irreverently, "I nominate Ben Ruby as head man of the colony of New York for—three months. Every-

body that's for it, stick up your hands."

Eleven hands went up. Gloria looked around at those who remained recalcitrant and concentrated her gaze on Stevens. "Won't you join us, Mr. Stevens?" she asked sweetly.

"I don't think this is the way to do things," said the Wall Street man with a touch of asperity. "It's altogether irregular and no permanent good can result from it. However, I will act with the rest."

"And you, Yoshio?"

"I am uncertain that permission is granted to this miserable worm to vote."

"Certainly. We're all starting from scratch. Who else is there? What about you, Mr. Lee?"

"I know him too well."

The rest of the opposition dissolved in laughter and Ben made his way to the place at the counter vacated by Roberts.

"The first thing we need is have some light," Ruby said. "Does anyone know where candles can be had around here? I suppose there ought to be some in the drug store across the street but I don't know where and there's no light to look by."

"How about flashlights? There's an electrical and video store up the block."

"Fine, Murray you go look. Now, Miss Roberts, will you be our secretary? I think the first thing to do is to get down the name and occupation of everyone here. That will give us a start toward finding out what we can do. Ready? Now you, Miss Rutherford, first."

"My name is Gloria Rutherford and I can't do anything but play tennis, drink and drive a car."

The rest of the replies followed. F. W. Stevens, Wall Street—Theodore Roberts, lawyer—Archibald Tholfsen, chess-player—H. M. Dangerfield, editor—Francis X. O'Hara, trucking business. This was the loud-voiced man who had cut the Gordian knot of the argument about

organization. "Are you a mechanic, too?" asked Ben.

"Well, not a first class one but I know a little about machinery."

"Good, you're appointed our doctor."

Paul Farrelly, publisher—Albert F. Massey, artist—the voices droned on in the uncertain illumination of the flashlights.

"Very well then," said Ben at the conclusion of the list. "The first thing I'll do is appoint Walter Beeville director of research. Fact number one for him is that we aren't going to need much of any sleep. I don't feel the need of it at all and I don't seem to see any signs among you.

"O'Hara will help him on the mechanical side—I suggest that as Mr. Beeville will need to observe all of us we make the Rockefeller Institute our headquarters. He will have the apparatus there to carry on his work. Let's go."

CHAPTER III

REBELLION

THEY whirled away to the east side of the city and up Second Avenue like a triumphal cortege, blissfully disregarding the dead traffic lights, though now and then they had to dodge the ruins of some truck or taxi that had come out second best from an argument with an elevated pillar where the driver's hand had been frozen at the wheel. At forty-ninth street Ben's car, in the lead, swung in to the curb and pulled up.

"What is it?" . . . "Is this the place?" . . . "Anything wrong?"

An illuminating voice floated up. "Electric store—get all the flashlights and batteries you can. We're going to need them."

A few moments later they were at the great institution, strangely

dark and silent now after all its years of ministering to the sick, with a line of rust showing redly on the tall iron fence that surrounded the grounds. They trooped into the reception room, flickering their lights here and there like fireflies. Ben mounted a chair.

"Just a minute, folks," he began. "I want to say something. What we have to do here is build civilization up all over again. Undoubtedly there are more people alive—if not in New York then in other places. We have two jobs—to get in touch with them and to find out what we can do. Mr. Beeville is going to find out about the second one for us but we can do a lot without waiting for him.

"In the first place there's that funny-looking bird we all saw and that ch—ed Roberts. There may be others like it and a lot of new queer forms of animal life around that would be dangerous to us. Therefore, I think it's in line to get some weapons. Miss Lami, you and Mr. Tholfsen are delegated to dig up a hardware store and find guns and cartridges. Now for the rest, I'm open to suggestions."

EVERYBODY spoke at once. "Wait a minute," said Ben. "Let's take things in order. "What was your idea, Mr. Stevens?"

"Organize regular search parties."

"A good idea, too. We don't even need to wait for daylight. Everybody who can drive, get a car and trot along."

"X-ray machines are going to be awfully useful in my work," offered Beeville. "I wonder if there isn't some way of getting enough current to run one."

"As far as I remember this building supplies its own current. Murray, you and Massey trot down and get a fire up under one of the boilers. Anything else?"

"Yes," came from Dangerfield, the editor. "It seems to me that the

first thing anyone else in the world would try to do if he found himself made into a tin doll like this is to get hold of a radio. How about opening up a broadcasting station?"

"I don't know whether you can get enough power but you can try. Go to it. Do you know anything about radio?"

"A little."

"All right. Pick whoever you want for an assistant and try it out. Any more ideas?"

"What day is it?" asked Ola Mae Roberts.

Nobody had thought of it and it suddenly dawned on the assemblage that the last thing they remembered was when the snow on the roof-tops bespoke a chilly February while now all the trees were in leaf and the air was redolent of spring.

"Why—I don't know," said Ben. "Anybody here got any ideas on how to find out?"

"It would take an experienced astronomer and some calculation to determine with accuracy," said Beeville. "We'd better set an arbitrary date."

"Okay. That's May 1, 1947. That's two years ahead of time but it will take that long to find out what it really is."

The assumption that sleep would be unnecessary proved correct. All night long cars roared up to the door and away again on their quests. The number of people found was small—the cream had apparently been gathered that morning.

O'Hara brought in a metallic scrubwoman from one of the downtown buildings, the tines that represented her teeth showing stains of rust where she had incautiously drunk water.

Stevens turned up with a slow-voiced young man who proved to be Georgios Pappagourdas, attaché of the Greek consulate, whose name had been in the papers in connection with a sensational divorce case. Mrs. Roberts came in with two men, one of them J. Sterling Vanderschoof,

president of the steamship lines which bore his name.

AT DAWN Dangerfield came in. He had set up a powerful receiving set by means of storage batteries but could find no messages on the air and could find no source of power sufficient for him to broadcast.

The morning, therefore, saw another and somewhat less optimistic conference. As it was breaking up Ben said, "You Tholfsen, take Stevens, Vanderschoof and Lee and get a truck, will you? You'll find one about half a block down the street. Go up to one of the coal pits and get some fuel for our boilers. We haven't too large a supply."

There was a clanking of feet as they left and Ben turned into the laboratory where Beeville was working with the scrubwoman as a subject.

"Something interesting here," said the naturalist, looking up as he entered. "The outer surface of this metal appears to be rustproof but when you get water on the inside things seem to go. It acts like a specially annealed compound of some kind. And look—"

He seized one of the arms of his subject, who gazed at him with mildly unresisting eyes, and yanked at the outer layer of metal bands that composed it. The band stretched like one of rubber and she gave a slight squeal as it snapped back into position.

"I don't know of any metal that has that flexibility. Do you? Why—"

The door swung open and they turned to see Murray and Tholfsen.

"Beg pardon for interrupting the sacred panjandrum," said the former, "but Stevens and Vanderschoof are indulging in a sulk. They won't want to play with us."

"Oh, cripes," remarked Ben carefully and started for the door, the other two following him.

He found the recalcitrants soon enough. The Wall Street man was seated across a doctor's desk from

Vanderschoof and looked up calmly from an interrupted conversation as Ben entered.

"Thought I asked you two to go with the boys for some coal," said Ben, waving at them. "My mistake. I meant to."

"You did. I'm not going."

Ben's eyes narrowed. "Why not?"

"This is the United States of America, young man. I don't recognize that I am under your orders or anyone else's. If you think you are going to get us to accept any dictatorship you've got another guess coming. As I was saying—" he turned back to Vanderschoof with elaborate unconcern and Murray took a step toward him, bristling angrily.

"Leave me alone, boys, I can handle this," said Ben, waving the other two back. "Mr. Stevens,"—the broker looked up with insolent politeness—"this is not the United States but the colony of New York. Conditions have changed and the sooner you recognize that the better for all of us. We are trying to rebuild civilization from the ruins. If you don't share in the work you shall not share in the benefits."

"And what are you going to do about it?"

"Put you out."

There was a quick flash and Ben was staring into the business end of a Luger automatic, gripped tightly in the broker's hand. "Oh no you won't. You forget that you made this anarchy yourself when you refused to have a president. Now get out of here quick and let me talk with my friend."

For a moment the air was heavy with tension. Then Vanderschoof smiled—a superior smile. Stevens' eyes blinked and in that blink Ben charged. As he moved Murray and Tholfsen followed.

There was a report like a clap of thunder in the narrow room, a tremendous ringing clang as the bullet struck the metal plate of Ben's shoulder and caromed to the ceil-

ing, whirling him around against the desk and to the floor with the force of its impact. Murray leaped across his prostrate body, striking at the gun and knocking it down just in time to send the second shot wild. Tholfsen stumbled and fell across Ben.

Ben was up first, diving for Murray and Stevens, now locked in close grapple, but the chess-player's action was more effective. From his prone position he reached up, grabbed Stevens' legs and pulled them from under him, bringing him down with a crash just as Ben's added weight made the struggle hopelessly one-sided.

In a moment more the dictator of the New York colony was sitting on his subject's chest while Murray held his arms. Vanderschoof, with the instinctive terror of the man of finance for physical violence, sat cowering in his chair.

"Get some wire," gasped Ben. "Don't think cloth will hold him."

THOLFSEN released his hold on the legs and climbed to his feet. "Watch the other one, Murray," said Ben, his quick eye detecting a movement toward the gun on Vanderschoof's part.

"Now, you listen." He addressed the man beneath him. "We could tie you up and lay you away to pickle until you died for the lack of whatever you need or we could turn you over to Beeville to cut up as a specimen. And by heaven,"—glaring with a kind of suppressed fury—"I wouldn't hesitate to do it! You're jeopardizing the safety of the whole community."

The grim face beneath him showed neither fear nor contrition. He hesitated a moment. "If I let you go and give you a car and a couple of batteries, will you promise to clear out and never come back?"

Stevens laughed shortly. "Do you think you can bluff me? No."

"All right, Tholfsen, get his feet first," said Ben as the chessplayer

reappeared with a length of light-cord he had wrenched from somewhere. The feet kicked energetically but the task was accomplished and the arms secured likewise. "You watch him," said Ben, "while I get a car around."

"What are you going to do?" asked Vanderschoof, speaking for the first time since the scuffle.

"Throw him in the river!" declared Ben with ruthless emphasis. "Let him get out of that." Stevens took this statement with a calm smile that showed not the slightest trace of strain.

"But you can't do that," protested the steamship man. "It's inhuman."

"Bring him outside, boys," said Ben without deigning to reply to this protest as he clanged out to the car.

They lifted the helpless man into the back seat and with a man on either side of him started for Queensboro Bridge. The journey was accomplished in a dead silence.

Halfway down the span Ben brought the taxi round with a flourish and climbed out, the other two lifting Stevens between them. Murray looked toward his friend, half expecting him to relent at the last moment but he motioned them wordlessly on and they set down their burden at the rail.

"Over with him!" said Ben remorsefully. They bent—

"I give up," said Stevens in a strangely husky voice. Murray and Tholfsen paused.

"Did you hear what I said?" said Ben. "Over with him!"

They heaved. "Stop!" screamed the broker. "I'll give up. I'll go. Oh-h-h!" The last was a scream as Ben laid a detaining hand on Murray's arm.

"Let him down, boys," he said quietly. "Now listen, Stevens. I don't want to be hard on you—but we've got to have unanimity. You're done. Take a car and clear out. If I let you go now will you promise to stay away?"

"Yes," said the Wall Street man. "Anything, only for heaven's sake don't do that!"

"All right," said Ben.

As they were loading the banker in the car for the return trip a thought struck Murray. "By the way, Ben," he remarked, "didn't he nick you with that gun?"

"That's right," said Ben, "he did." He gazed down at the long bright scratch in the heavy metal that covered his shoulder joint. It was uninjured.

CHAPTER IV

FLIGHT!

BUT when Tholfsen and Murray returned with the coal Vanderschoof was missing as well as Stevens. That evening, when the car in which Marta Lami had accompanied Roberts on the exploration of the Brooklyn Heights district drew up at the Institute, it had only one occupant.

"What happened to Miss Lami?" asked Ben.

Roberts gazed at him, surprised. "Didn't you send them? While we were at the St. George Hotel a car came along with Stevens and two of those men in it. One was the Greek. They spoke to her for a minute and she said they brought a message from you that she was to go with them."

"M-hm," said Ben. "I see. Well, as long as they don't come back, it's all right."

* * * * *

The car whirled along the Albany Post Road in a silence that was indicative of the rivalry that had already sprung up between Stevens and Vanderschoof. As for Pappagourdas he found himself demoted to the position of a yes man.

They had provided themselves with a liberal supply of guns and

ammunition and with the foolish conservatism of the very rich, refusing to believe that money was valueless, had raided store after store until they had acquired a considerable supply of currency.

"This is the Bear Mountain Bridge, isn't it?" said the dancer. "Let's stop at West Point and pick up a cadet. They're so ornamental."

Stevens glanced at her sourly from the wheel. "We've got to hurry if we want to get to Albany," he said.

"Still," offered Vanderschoof protectingly, "why not stop at the Point? We might find some people there. I know Colonel Grayson. Played golf with him last summer. When I holed out an eighteen-footer at the seventh, he was so mad he wouldn't speak to me all the rest of the afternoon. It was the turning point of the battle. Ha, ha!"

Stevens, with a grunt, swung the wheel round and began the ascent of the long bridge ramp. He realized he had been outmaneuvered. To cover his retreat he remarked, "Isn't that a bird?"

"The high muckamuck said something about birds last night," said the dancer, "but he's such a Holy Joe that I didn't pay any attention."

"Aren't the birds all dead?" asked the Greek, respectfully. "I saw some in the gutter outside my window and they were turned to iron."

The car coughed to the rise, made it and slid across the bridge.

"It is a bird," said the dancer, "and what a bird! Papa, look at the ostrich."

Pappagourdas and Vanderschoof followed her pointing finger. They saw, a couple of hundred feet behind and above them, the widespread wings and heavy body of the same type of four-winged bird Roberts had encountered. Vanderschoof tugged at his pocket. "Maybe it'll come close enough to give us a shot," he said hopefully.

The bird was certainly gaining on them though the speedometer of the car had risen above forty miles an

hour. As it drew nearer they could make out the high-domed unbird-like head with pop-eyes fixed in a permanent expression of astonishment, the short bill, slightly hooked at the tip, the huge expanse of the wings. It seemed to be inspecting them as a smaller avian might inspect a bug crawling across the road.

As it drew nearer it swooped to within a couple of dozen feet of the car. They noticed that its feet, folded back beneath the body, had a metallic luster. Then Vanderschoof fired with a bang that almost deafened the rest. The bird seemed surprised rather than frightened or resentful.

At the sound of the gun it bounded upward a few feet, then swung again, moving parallel with the car and twisting its neck to take a good look at the passengers. The chance was too good to be missed. Both Pappagourdas and Vanderschoof fired this time, steadying themselves against the motion of the car.

One of the shots evidently went home for a couple of feathers floated down and the bird, with a series of ear-piercing squawks, spiraled down the side of the mountain toward the riverbank three or four hundred feet below.

"Bull's eye!" yelled Pappagourdas. "Gimme the cigar! Let's stop the car and go get it."

"What's the use," said Stevens, "you couldn't eat it anyway. Listen to him yell, would you?"

Above the sound of the motor the screeching of the wounded bird still reached them faintly from the bottom of the cliff.

"I think it's a shame to shoot the poor thing," said Marta Lami.

"Oh, he'll be all right," said Vanderschoof. "Don't believe we touched anything but one wing. It'll just sit and eat ground-berries till it gets well."

IT WAS perhaps half an hour later and the distant hills were begin-

ning to acquire a fine powder of dusk when they saw the second bird—a rapidly moving speck, far behind them and to one side of the road. Vanderschoof saw it first and called the attention of the rest but they quickly lost interest.

He continued to observe it. Were there two? He thought so, yet—A moment later he was sure there was more than one as the car breasted a rise and gave them a better view. They seemed to be following fast. The ridiculous idea that they meant to do something about their fallen comrade came to him, to be dismissed instantly. Yet the birds were certainly following them and he thought he made out a third behind the others.

The car coasted down a long slope, crossed a bridge, began to go up a hairpin rise. Vanderschoof looked back. The birds were invisible. He looked again, in the right direction this time and saw them, so much larger and nearer that he cried out. The others ceased their low-voiced conversation at the sound of his voice.

"What's the matter, papa?" asked the dancer.

"Those birds—look."

"Why it looks almost as though they were following us."

She sat upright in the seat and squinted at them under an upraised hand. The queer birds were close enough now so that the difference between their forewings and the steadily beating hind wings could be made out.

"You don't suppose they could be mad at us?" she asked.

"Don't be foolish," said Stevens, without turning around. "Birds aren't intelligent enough for that." A long straight stretch lay before him and he let the car out. Vanderschoof, watching with a trace of anxiety, saw the birds also put on more speed.

"They *are* following us," he said with conviction.

"Look," said Marta Lami, "that

one is carrying something, too."

As she spoke the birds, flying high, gained a position just above and ahead of the car, dropped the object and instantly wheeled off and down to one side. There was a heavy thud on the road ahead and a big rock bounded and rolled a score of feet before the car.

Marta Lami screamed. Vanderschoof swore with feeling. "Get out your guns and drive them off," said Stevens. "You fools, why did you have to shoot at them in the first place?"

Before he had finished speaking Vanderschoof had his revolver out and was firing at the second of the birds, now swinging into position above them with another rock. He missed but the bird, surprised, dropped its burden too soon, and they had the satisfaction of seeing it bounce among the trees at the right of the road.

"Keep after them," said Stevens. "We're not far from the Point and we can get cover there."

Both men in the back were shooting now—Vanderschoof slowly and with deliberate aim, Pappagourdas in a panic-stricken rafale at the third bird, which, higher than the others, paid not the slightest attention to them but jockeyed for position. Stevens began to twist the steering wheel—the car described a fantastic series of zigzags.

"What are they?" he asked. "I never saw anything like them."

"I don't know," replied Vanderschoof. "Like the condors I used to see in South America, only bigger."

Crash! The third rock burst in a shower of fragments not ten feet away, one piece striking the windshield with a ping and sending a long diagonal crack across it. The first of the three birds was swinging up again with another rock, screeching hoarse communications at the others.

Marta Lami had fallen silent. As the bird began to circle above them, picking its position, Pappagourdas

suddenly ceased firing, with a curse. "Have you got any more bullets?" he asked. "Mine are all gone." His voice broke suddenly, half-hysterical. "It is the cranes of Ibicos," he cried.

The stone struck behind them. Evidently the bird had a healthy respect for Vanderschoof's bullets, which had kept it at such a height that it could not aim accurately. But as the next stone missed they changed their tactics, screaming to each other. The third bird, whose turn it was to drop a stone, merely flew along parallel with them, high enough to be out of range, waiting for the return of the others.

When they arrived all three strung out in a line and released their rocks simultaneously. There was a resounding crash, the car reeled perilously on the edge of the steep road, then righted and drove on with a clatter. Looking over the side Vanderschoof could see where the big rock had struck the right running board, tearing a foot or two of it loose to trail on the road.

"Wait," he cried but Stevens shook his head.

They had a bit of luck at this point. The hunt for more stones or something of the kind delayed their enemies and when they next saw the birds winging up behind them the white classical lines of the West Point administration building already loomed ahead, clear in the gathering gloom.

STEVENS turned in, swung the car around at the door, halted it with screaming brakes, just as the first of the birds overhead overshot the mark and turned to come back. In an instant the banker was out of the car, dragging at Marta Lami's hand.

Vanderschoof climbed nimbly out the other side and ran around the car toward the door of the building but the Greek missed his footing where the running board should have been and fell prone just as one

of the birds dived down with a yell of triumph and dropped his stone accurately onto the struggling man.

"Run!" shouted Stevens.

"But the Greek," panted Vanderschoof as they climbed the steps.

"Heck with him. Or here—wait." Stevens turned and thrust his fist through the glass upper portion of the door. Out in the dusk the three bird-forms were settling round their fallen foe.

The flash of the banker's gun stabbed the night and was answered by a scream. Before he could take aim again, with a quick beat of wings they were gone. When, daring greatly, he ran out a few moments later, he found that Pappagourdas was gone also.

He found the others on one of the benches in the outer office of the building, the girl with her face buried in her hands in an agony of fright and reaction. Vanderschoof, too old and cool a hand to give way in this fashion, looked up.

"What are they, Stevens?" he asked.

The Wall Street man shrugged his shoulders helplessly. "I don't know," he said. "Some new kind of high-power bird that developed while we were all being made into machines by that comet, I suppose. It's terrible. They've got the Greek."

"Can't we get after them? There ought to be airplanes here."

"In this light? Can you fly one? I can't and I don't imagine the little girl here can."

The "little girl" lifted her head. She had recovered. "What did we come to this joint for anyhow?" she asked. "To hang crêpe on the chandeliers?"

The words had the effect of an electric shock.

"Why, of course," said Stevens, "we did come here to see if we could find someone, didn't we?" and turning round he pushed open the door into the next room. Nothing.

"Wait," he said. "Not much use trying to do anything tonight. We

haven't any flashlights."

"Aw, baloney," said the dancer. "What do you want us to do? Sit here and count our fingers? Go on, big boy, find a garage. You can get a light from one of the cars."

"Won't those birds see it?"

"You got a yellow streak a mile wide, haven't you? Birds sleep at night."

Stevens took a half-unwilling step toward the door. "Let me come with you," said Vanderschoof, rising.

"What's the matter, papa? You got a little yellow in you, too?"

He was dignified. "Not at all. Here I'll leave my gun with you, Miss Lami."

"We'll be seeing you," said Stevens over his shoulder. "Don't worry." And they were gone.

To the dancer their absence was endless. She would have given anything for the velvet kick of a good drink—"but I suppose it would burn out my bearings," she mused ruefully. Heavens, she must spend the rest of her days as a robot. In the fading light she ruefully contemplated the legs that had delighted the audiences of two continents, now become ingenious mechanical devices beyond the power of delighting anyone but their owner.

More clearly than the rest she realized that very little was left of the old relation between the sexes. What would happen when the forceful Stevens made the discovery also? Probably he would make a thinking robot of her to serve his ambition. Well, she had chosen to go with them—they seemed to offer more amusement than the stuffy prigs of the colony.

What was that?

She listened intently. A subdued rattling, slightly metallic in character. It might be a rat—no, too mechanical. The men—probably it was them or one of them, returning. She glanced out of the window. Not there. The sound again—not from outdoors but behind her—within the room? She gripped the gun Vander-

schoof had given her. Rattle, rattle. She wished furiously for a light.

THE birds? No—birds sleep at night. Rattle, rattle. Persistently. She stood up, trying to pierce the gathering dimness. No, the birds would make more noise. They moved surely, with hoarse screams, as though they thought themselves the lords of the world.

This sound was small, like the chatter of a mechanical rat. What new horror in this strange world might it not conceal? On slenderest tiptoes she backed cautiously across the rug toward the outer door. Better the chance of the birds than this unknown terror of the darkness.

Holding the gun before her firmly she stepped back, back, feeling with one hand for the door. Her hand met its smooth surface, then clicked as the metallic joints came in contact with the doorknob. She paused, breathless. Rattle, rattle, went the small sound, discouraged.

With a sudden jerk she flung the door open and tumbled down the steps, half-falling. As she fell, as though in answer to the metallic clang of her body on the stone, a long pencil of violet light sprang silently out from somewhere back in the hills, moved thrice across the sky, then faded as swiftly as it had come.

She felt the beam of a flashlight in her eyes and got up, hearing her voice with a sort of inward surprise as it babbled something slightly incoherent about, "things—in there."

Stevens' voice, rough with irritation. "What is it you're saying?" He shook her arm. "Come on, little woman, pull yourself together."

"There must be someone else around here," remarked Vanderschoof irrelevantly. "Did you see that searchlight?"

Marta Lami pulled herself up short, shaking loose the hand with a touch of the arrogance that had made her the queen of the night life of New York.

"Something in there gives me the fantods," she said, pointing. "Sounds like some guy shooting craps with himself."

Stevens laughed, somewhat forcedly. "Well, it's nothing to be scared of unless it's one of those bloody birds and if it was that he'd be taking us apart now. Come on!"

He flung the door open and plunged in, the flashlight flickering before him. Empty.

There was a door at the further end, next to the one they had investigated before. Toward this he strode, clump, clump on the carpet, and flung it open likewise. Empty again. No, there was something. The questing beam came to rest on a brown army tunic behind the desk, followed it up quickly to the face and there held. Staring at them with mechanical fixity was another of those simulations of the human face in metal with which they were by now so familiar. But this one was different.

For it held the balance between the walking cartoons of men in metal, such as they themselves were and the ugly and solid statues they had seen strewn about the streets of New York.

It had the metal bands across the forehead that they possessed, above which issued the same wiry hair, in this case curiously interwoven as though subjected to great heat and melted into a single mass. The nose was all of solid metal and the eyes—the eyes—were the eyes of a statue, giving back no lustrous reflection of glass.

They paused, breathless, then stepped forward and as the beam of light shifted when Stevens moved, rattle, rattle came the sound Marta Lami had heard. And when the light went back the unseeing eyes had moved.

For a few seconds no one spoke. Then, "Good Lord, it's alive!" said Vanderschoof in a hushed voice and a thrill of horror went through the others as they recognized the truth

of his words.

Stevens broke the spell, stepping swiftly to the desk. "Can we do anything for you?" he asked. No movement came from the metal figure—only that ghastly rustle of the eyes as they turned here and there in the fixed head, searching for the light they would never find again.

The Wall Street man lifted one of the hands, tried to flex the arm that held it. It dropped back to the deck with a crash. Yet the metal of which it was composed seemed in itself to be as pliant as that of their own arms.

A feeling of wonderment mingled with the horror of the spectators.

"What happened to him?" asked Marta Lami in a whisper as though she feared awakening a sleeper.

Stevens shrugged. "What's happened to all of us? He's alive, I tell you. Let's get out of here. I don't like it."

"But where to?" asked Vanderschoof.

"Follow the Albany road," said Stevens. "We ought to move on. If those birds come back in the morning—" he left the sentence unfinished.

"But what about this poor chap?" asked Marta Lami.

"Leave him," said Stevens, then suddenly giving way, "there's too much mystery about this whole business around here. You can stay here till you rot if you like. I'm clearing out."

CHAPTER V

THE MENACE

NATURALLY exploration of the familiar, yet unfamiliar world into which they had suddenly been thrown was the first preoccupation of the New York colonists. None of the group cared to wander far from the Institute during the first weeks,

however, in view of the possible difficulty of obtaining electrical food for a long trip and Beeville's researches on the potentialities of their new bodily form advanced so slowly that they hardly dared leave.

His discoveries in the first weeks were in fact purely negative. Farrelly, the publisher, smashed a finger in some machinery but when O'Hara turned an exact duplicate out on his lathe and Beeville attached it the new member lacked sensation and could be moved only with conscious effort—an indication that some as yet unfamiliar reaction underlay the secret of motion in their metal form.

But the greatest difficulty in the way of any activity lay in the almost abysmal ignorance of mechanical and technical arts on the part of the whole group. O'Hara was a fair mechanic, Dangerfield dabbled in radio and Farrelly could run a printing press—he published a comical parody of a newspaper on one for several days, then abandoned the effort. But beyond that their utmost accomplishment was driving a car and most of them realized how helpless the old civilization had been without its hewers of wood and drawers of water.

To remedy this condition as much as to keep them busy Ben assigned to each some branch of mechanical science to be learned, the supply of information in the form of books and of experimental material in every form being inexhaustible.

Thus the first week found Tholfson and Mrs. Roberts scouring the line of the New York Central for a locomotive in running order. After numerous failures they succeeded in getting the thing going only to discover that the line was blocked with wrecks and that they would need a crane to clear the track for an exploring journey of even moderate length.

At the same time Murray Lee, with Dangerfield and two or three others, made an effort to get the

Park Central's broadcasting station in operation; a work of some difficulty, since it involved ventures into what were for them unknown fields. Daily they tap-tapped messages to each other on telegraph sets rescued from a Western Union office in preparation for the time when they could get a sending set put together.

But the most ambitious effort and the one that was to have the largest ultimate consequences was the expedition of Farrelly, Gloria and a clothing-store proprietor named Kevitz in quest of naval adventure. After a week's intensive study of marine engines from books the three appropriated a tug from the Battery and set off on a cruise of the harbor.

Half an hour later they were high and dry off Bedloe's Island, gloomily contemplating the prospect of spending their lives there. An attempt to swim while weighted down with three hundred pounds of hardware could end only in failure.

Fortunately the tide came to their rescue and with more daring than judgment they continued their voyage to Governor's Island, where they were lucky enough to find a solitary artilleryman, weak with hunger but hilarious with delight at the discovery that his metallic form was not a delirium tremens delusion induced by the two quarts of gin he had absorbed the night before the change.

The giant birds, which Beeville had professionally named "tetrapteryxes", seemed to have vacated the city with the appearance of the colonists. Even the nest Roberts had stumbled on proved deserted when an expedition cautiously revisited the place. Memory of the birds had sunk to the level of a subject for idle remarks when a new event precipitated it back into general attention.

Massey, the artist, with all the time in the world and the art supplies of New York under his finger, had gone off on an artistic jag, painting day and night. One morning he took his canvas to the top of the

Daily News building to paint the city at dawn from its weather-observation station.

The fact that he had to climb stairs the whole way up and finally chisel through the door at the top was no bar to his enthusiasm. Kevitz, hurrying down Lexington Avenue in a car to join his fellow mariners in investigating the machinery of a freighter, saw him in a little steel cage, silhouetted against the reddening light of day.

There was an informal rule that everyone should gather at the Institute at ten in the evening unless otherwise occupied, to report on the day's events. When Massey did not appear two or three people made comments on the fact but it was not treated as a matter of moment.

When the artist had not shown up by dawn of the next day, however, Murray and Gloria went to look for him, fearing accident. As they approached the building Murray noticed that the edge of the weather observation platform was twisted awry. He speeded up his car but when they arrived and climbed the mountainous flights of stairs he found no bent and damaged form as he had expected.

THE roof of the building held nothing but the painting on which he had been working—a half-completed sketch of the city as seen from the tower.

"Where do you s'pose he went?" asked Gloria.

"Don't know but he went in a hurry," replied Murray. "He doesn't care about those paintings much more than he does about his life."

"Maybe he took a tumble," she suggested. "Look, there's his easel and it's busted."

"Yes, and that little chair he totes around—look how it's all twisted out of shape."

"Let's look over the edge. Maybe he went bugs and jumped. I knew a guy that did that once."

"Nothing doing," said Murray,

peering over the parapet of the building.

"Say—" it was Gloria who spoke. "Do you suppose those birds—the tetra-axes or whatever Beeville calls them—?"

They turned and scanned the sky. The calm blue vault, flecked by the fleecy clouds of summer, gave no hint of the doom that had descended on the artist.

"Nothing to do but go home, I guess," said Murray, "and report another robbery in Prospect Park."

The meeting of the colonists that evening was serious.

"It comes to this, then," said Ben finally. "These birds are dangerous. I'm willing to grant that it might not have been they who copped Massey but I can't think of anything else. I think it's a good idea for us to leave here only in pairs and armed until we're certain the danger is over."

"Ain't that kind of a strong step, Mr. Ruby?" asked Kevitz. "It don't seem to me like all that business is necessary."

Ben shook his head decisively. "You haven't seen these things," he said. "In fact, I think it would be a good idea for us all to get some guns and ammunition and do target practice."

The meeting broke up on that note and the members of the colony filed into the room where the supply of arms was stored. Presently they formed an automotive cavalcade through the streets in search of a suitable shooting gallery.

When targets were finally set up in the street under automobile lights the general mechanical inefficiency of the colony revealed itself once more. Gloria Rutherford was a dead shot and the artilleryman from Governor's Island almost as good.

Ben himself and Murray Lee, who had been a National Guardsman, knew at least the mechanism of rifles but the rest could only shut their eyes and pull the trigger with the vaguest of ideas as to where the

bullet would go. And, as Ben pointed out after the buildings along the street had been peppered with a large portion of Abercrombie and Fitch's stock of ammunition, the supply was not inexhaustible.

"And what shall we do for weapons then?" he asked.

Yoshio, the little Japanese, raised his hand for attention.

"I have slight suggestion, perhaps not worthy exalted attention," he offered. "Why not all people as gentlemen old time in my country, carry sword? It is better than without weapon."

"Why not indeed?" said Ben above a hum of laughter. "Let's go." And an hour later the company re-emerged from an antique store, belted with the strangest collection of swords and knives and fishing gaffs ever borne by an earthly army.

"I wonder, though," said Gloria to Murray Lee, as they reached the Institute as dawn was streaking up the sky. "All this hooley doesn't seem to mean much. If those birds are as big as that they aren't going to be scared by these little toad-stabbers."

She was right. That night Ola Mae Roberts was missing.

The siege came a week later.

It was a week of strained tenseness. A certain electricity seemed at hand in the atmosphere, inhibiting speech. The colonists felt almost as though they were required to whisper.

A week during which Murray, with Dangerfield and Tholfsen, worked energetically at their radio and progressed far enough so they could do a fairly competent job of sending and receiving in Morse code. A week during which the naval party got a freighter from the South Street docks and brought her round into the Hudson.

AT DAWN one morning Gloria, with Farrelly, Kevitz and Yoshio, piled into a limousine with the idea of taking the freighter on a

trip to Coney Island. Murray accompanied them to try communicating with the shore via the ship's wireless.

The day was dark with lowering clouds, which explains why they missed seeing the tetrapteryxes. But for the General Sherman statue they never would have seen them until too late. The general's intervention was purely passive. Murray noticed and called Gloria's attention to the curious expression the misty light gave the bronze face and she looked up—to be recalled to her driving by a yell from Kevitz, announcing the metallic carcass of a policeman squarely in their path.

Gloria twisted the wheel sharply to avoid it. The car skidded on the damp pavement and, reeling crazily, caromed into the iron fence around the statue with a crash. At the same moment an enormous mass of rock struck the place where they should have been and burst like a shell, sending a shower of fragments whistling about their ears.

Shaken and dazed by the shock they rolled out of the car, for the moment mistaking the two impacts for one. As they did so there came a rush of wild wings, an eldritch scream and Yoshio was snatched into the air before their very eyes.

Kevitz fired first, wildly and at random. Murray steadied himself, dropping his gun across his left forearm, shot cool and straight—but at too great a distance.

They saw nothing but a feather or two floating down from the great four-winged bird as it swung off over Central Park, carrying the little Japanese. They saw him squirm in the thing's grip, trying to get his sword loose—and then, with a rattle of dropped stones around them, more of the birds charged home.

Only Gloria had thought of this and withheld her fire. The others swung round as she shot and in an instant the whole group was a maze of whirling wings, clutching claws, shouts, shots and screams. In twen-

by seconds it was done.

Gloria and Murray rose, panting and breathless, and looked about. Beside them, two gigantic bird-forms were spilling their lives in convulsive agony. Dangerfield and Farrelly were gone—and a rending screech from behind the buildings told only too well where.

"What's the next step?" asked Murray with such owlish solemnity that Gloria gave a burst of half-hysterical laughter. She looked around.

"Beat it for that building," she said and, gathering her torn skirts about her, set the example.

They made it by the narrowest of margins, standing breathless in what had been the Peacock Alley of one of New York's finest hotels to see one of the great birds strut past the door like a clumsy caricature of an angel.

"And poo-poo for you," said Murray, thumbing his nose at the apparition. "But what we'll do now I don't know."

"Play pinochle till they look us up," suggested Gloria. "Besides, my bullets are all gone."

They waited all day, taking tentative glances from one or another of the windows. The birds remained invisible, apparently not caring for the prospect of a battle in the constricted space of the hotel rooms. But amid the rain and low-hung clouds they might be lurking just outside and both Murray and Gloria judged it too dangerous to venture a dash. As night came on, however, they made a try for the hotel's garage, achieved it without accident and between them rolled one of the cars to the door.

"Wait," said Murray, as Gloria got in. "What was that?"

"This stinking starter." She started her foot vigorously. "It won't work."

"No—wait." He held out a restraining hand. A sudden gust of wind bore a dash of rain down against them and with it, from the northeast, a faraway scream, then a

tapping and a heavy thud.

"Hot dog!" ejaculated Murray. "They're getting after the crowd. And at night too."

The car jerked forward suddenly as the starter caught. "Hold it," cried Murray. "Douse those headlights." They dodged the wreck of a bus, swung round a corner and headed for First Avenue, gathering speed. Another corner, taken on two wheels in the darkness, the way to the Institute lay before them.

SUDDENLY a great flame of light sprang out in the sky, throwing the whole scene into sharpest relief. There was a crash of rifle fire from window and door of the building and across the front of it one of the birds coasted past. Crash! In the street before them something like a bomb burst, vomiting pennons of fire.

Gloria swung the wheel, swung it back; they had a mad glimpse of brilliantly burning flames inside one of the buildings across the street from the Institute. Then they were tumbling out of the car with rifle fire beating all around them and the thud of dropping objects on either side.

Murray stumbled but the door was flung open and they were jerked in just as one of the huge bird forms flung itself down past them.

"Thank God, you're safe," said Ben Ruby's voice. "They got Dearborn and Harris and they're besieging us here." He pointed out of the window across the street, where the rapidly gaining fire was engulfing the building.

"Did the birds do that little trick?" asked Gloria.

"I hope to tell you, sister. You ain't seen nothing yet, either. They're shedding incendiary bombs all over the shop. How about Kevitz and Farrelly?"

"Got them, too. At the Plaza—and the little Japanese. Too bad—I liked that little sprout."

"I thank gracious lady for kindly expressed sentiment, but oversize

avians have not yet removed me," said a voice and Gloria looked down to see Yoshio bowing at her side.

"Why how did they come to let you off? Last I saw you were doing a headspin over Central Park."

"I was fortunate," replied the little man. "Removing sword I operate on said bird to such extent that he drop me as hot customer, plosh in large tree. To get home is not so easy but I remember armored car provided by intelligent corporation for transport of bankroll, so here I am."

"Bright boy," said Gloria. "Listen!" Above their heads came another crash, a tramp of feet and shouts. Roberts dashed into the room, rifle in hand. "They've set the place on fire," he said. "We'll have to clear out."

BEN RUBY fumbled at his waist, drew forth a whistle and blew a piercing blast, which was answered by shouts as members of the colony began to pour into the room from various points.

Another bomb burst in a fluff of light just outside the window, throwing weird shadows across the gathering and splitting a pane here and there by the force of its impact.

"Hot stuff," remarked Gloria. "What are they trying to do—take us all at one gulp?"

"Beeville says they never thought it up on their own," Ben assured her. "Not smart enough. He thinks somebody doesn't like us and is sending them around to tell us so. Listen, everybody!"

The room quieted down.

"We've got to go at once. Our destination is the Times Square subway station. They can't get us there. Anybody who gets separated meet the rest there. We'll go in groups of three to a car—one to carry a gun, one a sword and one a light. Everybody got it? Good. Somebody give Gloria one of those express rifles. Here's the list then. First party—Miss Rutherford, gun; Yo-

shio, sword; O'Hara, light. Go ahead."

A coil of smoke drifted across the room from somewhere above—the sough of the fire made the only background to his words. With quick handshakes the three made ready. A volley from the windows flashed out and they dashed off. Those inside caught a glimpse of the dark form of their car as it rolled into the night. They were safe at all events.

The second carload, in Yoshio's armored vehicle, also got free, but the third had trouble. They had hardly made half the distance to the parked cars before there was a whir of wings, a scream, the quick burst of a bomb, luckily too far behind them to do damage.

Those inside saw the light-man stop suddenly, flashing his beam aloft, saw an orange flame spring from the gun and then their view of the three was blotted out in a whirl of wings and action.

"Everybody out!" yelled Ben. "Now, while they're busy." In a concerted rush the colonists poured through the door.

Nobody could remember clearly what did happen. Someone was down—hurt somewhere—but was flung into a car. Through the turmoil the tossing form of one badly-wounded bird struggled on the ground and with a roar of motors the cavalcade started.

CHAPTER VI

THE TERROR BY NIGHT

IT WOULD be futile—and impossible—to chronicle all the events of that wild ride—to tell how the light-bombs dropped unceasingly from above—how the driver of one car, blinded by the glare, hurtled his vehicle through the plate-glass window of a store—how McAllister, the artilleryman, fought off the birds

with a huge shard of glass from the window.

How the passengers in another car, wrecked by a bomb, got a fire-engine and cleared their way to Times Square with clanging bell and clouds of malodorous fire-extinguisher chemicals—how Mrs. Roberts decapitated one of the monsters with a single blow of the cleaver she carried.

Dawn found them, a depressed group of fourteen, gathered in the protection of the underground passages.

"Well, what next?" asked Gloria, who seemed to have preserved more of her normal cheerfulness than anyone. "Do we stay here till they come for us or do we go get 'em?"

"We get out," said Ben Ruby. "No good here. They know too much for us."

"Right," declared Beeville. "The usual methods of dealing with animals won't work this time. They are all based on the fact that animals are creatures of habit instead of intelligence and unless I am much wrong these birds are intelligent and have some bigger intelligence backing them."

"You mean they'll try to bomb us out of here?" asked Roberts.

McAllister looked up from the dice he was throwing. "You bet your sweet life they will. Those babies know their stuff. The one that was after me was onto the manual of the bayonet like he'd been raised on it."

"That's nice," said Gloria, "but what are we going to do about it?"

"Get an anti-aircraft gun from the island and shell heck out of them when they come round again," suggested the artilleryman.

"Said gun would be considerable weight for individual to transport in pocket," said Yoshio as Ben raised his hand for silence amid the ensuing laughter.

"There's a good deal in that idea," he said, "but I don't think it will do as it stands. The birds would bomb our gun to blazes after they had a

dose or two from it. They're not so slow themselves you know. How about some of the forts? Aren't there some big ones around New York?"

McAllister nodded. "There's Hancock. We could get a ship through."

"Say!" Gloria leaped suddenly to her feet. "While we're about it can't we get a warship—a battleship or something? Those babies would have a hot time trying to bomb one of Uncle Sam's battleships apart and there's all kinds of anti-aircraft guns on them."

"There's a destroyer in the Hudson," said someone.

"How many men does it take to run her?"

"Hundred and fifty."

"But," put in Gloria, "that's a hundred and fifty of the oldstyle men who had to have their three squares and eight hours' sleep every day and they did a lot of things like cooking that we won't have to. What do you say, Dictator, old scout? Shall we give it a whirl?"

"Okay—unless somebody has something better to offer," declared Ben. In fifteen minutes more the colonists were cautiously poking their way out of the subway station en route to take command of U. S. S. *Ward*.

Cleaning up the ship before the start took the colonists a whole day. A sooty dust like the product of a particularly obnoxious factory had settled over everything, and dealing with the cast-iron bodies of the sailors, wedged in the queer corners where they had fallen at the moment of the change, was a job in itself.

As night shut down, the whole crew, with the exception of Beeville and Murray Lee, who had spent some time in small boats and had therefore been appointed navigators, was busy going over the engine-room, striving to learn the complex details of handling a warship.

Murray and Beeville were poring over their navigating charts when

a step sounded outside the chart-room and the wire-frizzled head of Gloria was thrust in.

"How goes it, children?" she asked. "Do we sail for the Cannibal Islands at dawn?"

"Not on your life," replied Murray. "This hooker is going to pull in at the nearest garage until we learn what it's all about. Talk about arithmetic! This is worse than figuring out a time-table."

GLORIA laughed, then her face became serious.

"Do you think they'll bomb us again, Mr. Beeville?"

"I don't see why not. They were clear winners in the last battle. But what gets me is where they come from. Why, they're a living refutation of the laws of evolution on the earth! Four wings and two legs! Although—" the naturalist looked at the sliding parts of his own arm—"they are rather less incredible than the evolution that has overtaken mankind unless we're all off our heads. Do you know any way to account for it?"

"Not me," said Murray. "That's supposed to be your job. All we do is believe you when—"

Bang! The anti-aircraft gun had gone off just outside with an ear-splitting report. With a common impulse the three made for the door and looked upward to see the shell burst in a puff of white smoke, outlined against the dark clouds of evening, while above and beyond it sailed a black dot with whirring wings.

"That settles it," said Murray. "Whether we like it or not we're going away from here. I wish those nuts hadn't fired though. Now the birds know what we've got. Trot down and tell them to get up steam, that's a good girl, Gloria."

The lone tetrapteryx seemed no more than a scout, for the attack was not followed up. But it takes time to get steam up on long disused marine engines and all hands were be-

low when the real attack was delivered.

It began with the explosion of a bomb somewhere outside and a dash of water against the vessel's side that threw all of them off their feet. There was a clang of metal and a rush for the deck—cut across by Ben's voice.

"Take it easy! Everybody to the engines but McAllister, O'Hara and the navigators."

The four sprang for the ladder, Murray in the lead. *Crash!* A sound like the thunder of a thousand tons of scrap iron on a sidewalk and the destroyer pitched wildly.

Murray's head came level with the deck. Instead of the darkness he had expected it was flung into dazzling illumination by a flare burning on the water not fifty yards away, a light so intense that it seemed to have physical body. There was a perceptible wave of heat from it and the water around it boiled like a cauldron.

He tumbled onto the deck, running forward to trip the release of the anchor chain. At the break of the forecastle he stumbled and the stumble saved him, for at that moment another of the bombs fell just in front of the foredeck. The whole bow of the ship seemed to burst into intense, eye-searing flame. Deafened and blinded Murray lay face down on the deck, trying to recover his senses. Behind him the others, equally overwhelmed, tumbled on the iron surface, rolled over and over blindly.

But the birds, apparently unaware of how heavy a blow they had struck, seemed wary of the gun. The four groveling on the deck heard scream and answering scream above them as the monsters discussed the question on the wing.

If they reached a decision it was too late, for McAllister and O'Hara, blind, drunk and sick though they were, staggered to the gun and sent a shot shrieking at wild venture into the heavens. Beeville, nearer to

the blinding blaze of light, recovered more slowly but found his way to the bridge where he fumblingly pulled the engine-room telegraph over to *Full Speed Ahead*.

Below, in the bowels of the vessel, there was a rumble of activity. A rapid whoosh of steam came from an exhaust pipe, a dash of sparks from the destroyer's funnels and slowly and haltingly she began to move. *Bang!* went the anti-aircraft gun. Beeville heard Murray climbing the bridge behind him and then his cry, "The anchor!"

Too late—with a surge that changed to a rattle, the destroyer moved, tearing the anchor from its ground and swinging slowly halfway around as the weight dragged the damaged bow to one side. At that moment came another bomb which, but for their motion, would have struck fair and square amidships. *Bang! Bang!* went the anti-aircraft gun.

Murray dragged at the wheel, then swung the engine-room telegraph back to *Stop*. Just in time—the destroyer's bottom grated on something, her prow rent the side of a big speedboat and she came to rest, pointing diagonally upstream.

Fortunately the attack broke off as rapidly as it had begun. A few screams, lost in the darkness of the night, were the only answer to another shell from the gun. But there was no assurance that this was more than a temporary respite.

Murray and Beeville strove desperately to bring the warped bridge mechanism into running order while O'Hara routed out a blow-torch from somewhere and attacked the chain, now welded into the solid mass of the deck by the force of the light-bomb.

Finally, weaving to and fro in the hands of the inexperienced mariners, she was got round and pointed downstream and out to sea.

If the birds sought them again in the darkness there was no sign at all of it.

DAY found them stumbling down the Jersey coast, the foredeck a mass of wreckage, the ship leaking badly.

"Well, where are we now?" called a cheerful voice, as Murray Lee stood at the wheel. "Australia in sight yet?"

He looked up to see Gloria's head emerging from the companion.

"Come on up," he said, "I'm just going to turn the wheel over to Beeville and get busy with this radio. Don't think the bomb knocked it out. It did everything else though. Look at that."

He indicated the prow of the ship, where the fore-turret guns hung like a tired candle and the whole stern of the vessel had dissolved into tears of metal.

"Golly," said Gloria, "that was some egg those birds laid. What was it, anyway?"

"Don't know. Never saw anything like it before. Must be some kind of new-fangled high-power incendiary bomb to melt steel down like butter. Why, even thermite wouldn't do that."

"I hope our friends don't think of looking us up here or we'll be finding out what it's like to walk under water."

"You said something, sister," declared Murray. "Wait! I think it got something."

He fumbled with the radio dials before him, swinging them this way and that, then clamped on the headset. "Oh, boy, there's something coming through . . . We're not alone in the world then . . . Yes, there she is . . . I wish they wouldn't send so fast . . . AAM Two calling . . . Now who is AAM Two?" His fingers pressed the key in reply as the others watched him with bated breath.

"Position, seventy-three, fifty-three, west longitude; forty, 0-three, north latitude. Here"—he wrote the figures down—"take this, one of you and dope it out. Ssh, there's more coming. Oh, he wants to know who we are and where. Call Ben, will

you, Gloria?"

She dashed off to return with the dictator of the colonists just as Beeville, who had been fumbling over the charts with one hand, called suddenly, "Why the position they give is right near here—hardly a hundred miles away. I don't know just what ours is but it can't be far from this spot. Tell them that."

"Find out who they are first," Ben put in, practically. "After what they've done I wouldn't put it past the tetrapteryxes to handle a radio set."

"... His Majesty's Australian ship *Brisbane*, they say," said Murray. "Wait a minute, since they're so near, I think I can switch them over to the radiophone." He ticked the key a moment, then twisted more dials and leaned back as a full and fruity voice, with a strong English accent, filled the room.

"Compliments of Captain Entwhistle of the Royal Australian Navy to the commander of the U. S. S. *Ward* and can we arrange a meeting? The comet appears to have done a good deal of damage in your part of the world and you are the first people we have encountered."

"Where's your microphone?" asked Ben. "Oh, there—compliments of Benjamin Franklin Ruby, temporarily in command of U. S. S. *Ward* to Captain Entwhistle of the Royal Australian Navy and none of us are sailors. We just borrowed this ship and if you want to see us you'll have to pick us up. We'll keep along the coast toward Cape May. Can you meet us?"

A chuckle was audible from the radiophone. "I think we can manage it. Are there any of the big birds about in your part of the world? They have been bothering us all summer."

"Yes," replied Ben, "that's what we're running away from now. They've got some bombs that are pure poison and they've been making regular war on us—probably you knew about it?"

"We haven't seen anything like that yet," declared the voice from the loudspeaker, "but we've had plenty of trouble with them. Hold on a moment. Our lookout reports sighting smoke from your funnels. Hold your course and speed. We'll pick you up."

The voice ceased with a snap and the four in the control room of the destroyer looked at each other.

"I'm glad he came around," remarked Ben. "This destroyer is getting shopworn. Besides, with a good warship on hand we'll be able to give those birds what they're looking for. I hope he's got planes."

"And somebody to fly them," continued Murray. "What'll we do if he has—go back and give them hell?"

"If we can. Apparently he doesn't like the birds any too well himself. It was the first thing he mentioned."

They ceased speaking as the thin pennon of smoke, followed by two tall masts, became visible over the horizon. In a few minutes more the *Brisbane* swept up, swung a circle and came to rest near them, while from her side dropped a barge that began to cut water toward them.

A moment later she was alongside. Ben stepped out on the deck, and as he did so, there was a mutual exclamation of horrified amazement—for Captain Entwhistle of the Royal Australian Navy was as much flesh and blood as any man they had seen in the old days—but a pale blue in color. All his sailors were of the same extraordinary hue.

CHAPTER VII

AN EXPLORATION

THERE was a moment's silence as the Australian captain steadied himself against the roll of the vessel, staring incredulously at the group that gathered round him.

"Are you—human?" he finally

managed to gasp.

"If we aren't somebody's been kidding us," said Gloria irreverently. "But are you? You're all blue!"

"Of course," said the captain. "It was the comet. We knew it struck in America somewhere but didn't know where or what it did. What's the matter with your ship?" He indicated the wrecked and leaking bow. "She seems to be down by the head."

"Oh, that was a valentine from the birds," said Ben. "Can you give us quarters on your vessel? There aren't many of us."

Captain Entwhistle seemed to come out of a dream. "Of course, of course. Come on. We can discuss things better in my cabin."

As they mounted to the deck of the *Brisbane* even the trained sailors, the light blue of their faces oddly at variance with the dark blue of their uniforms, could not refrain from staring at the colonists. They crowded into the captain's cabin past rows of eager blue faces.

"I suggest," said Captain Entwhistle, "that we begin by telling each other how this happened. I can scarcely credit the fact that you are human and can walk and talk. Would any of you care for a whisky and soda?"

"No, thanks," said Murray, "but I'll have a drink of lubricating oil if you can find any."

The naval officer looked at him and remarked, a trifle stiffly, "Certainly, if you wish. Williams—"

"Oh, don't mind him," Ben Ruby cut in. "Pardon me, Captain, he can drink lubricating oil perfectly well but he's joking with you. You were saying about the comet—"

"Why, you knew that the big comet struck the earth as predicted, didn't you? It was on the morning of February sixteenth, last year—evening of February fifteenth by American time. Even in our country, which is on the other side of the earth, it caused a good deal of damage. The gases it set free put every-

body to sleep and caused a lot of wreckage.

"Our scientists say the gases of the comet in some unexplained way altered the iron in the haemoglobin of our blood to cobalt. It seems to work just as well but that's why we're all blue. I don't quite understand it myself but you know how these medical Johnnies are. Now what happened to you people?"

"May I ask something first?" said Beeville. "What day is this?"

"August eighteenth, nineteen fifty-six," said the captain, slightly baffled by the question.

"Good Lord!" said the scientist. "Then we were there for over a year!"

"Yes," said Ben. "All of us you see here and several others returned to consciousness about the same time two months ago. We know nothing of what the comet did to us or how this change occurred except that when we woke up we were just what you see.

"Dr. Beeville has been experimenting with a view to finding out what happened but he hasn't made much progress so far. All we know is that we're composed of metal that doesn't rust easily, make our meals off electricity and find the taste of any kind of oil agreeable. And the birds—" he broke off with a gesture.

"Oh yes, the birds," said the captain. "Have they been annoying you too? That's one of the reasons, aside from exploration, why we're here. I assume you mean the big four-winged birds we call dodos down under.

"We haven't seen much of them but occasionally they come and fly away with a sheep or even a man. One of our aviators chased one several hundred miles out to sea recently and we had assumed they came from one of the islands. Our scientists don't know what to make of them."

"Neither do ours except that they're an unadulterated brand of hell," put in Murray. "We were all

living in New York, snug as bugs in a rug, when they began dropping incendiary bombs on us and carrying off anyone they could get hold of."

"Including this insignificant person," said Yoshio, proudly.

"Incendiary bombs! Do you mean to tell me they have intelligence enough for that?"

"I'll tell the cockeyed world they have! Did you see the prow of our ship? That's where one of their little presents got home. If anyone had been there he wouldn't be anything but scrap iron now. If you really want to find out what it's all about come on up to New York—but get ready for the fight of your life."

The captain leaned back, sipping his drink meditatively. "Do you know," he said, "that's just what I was thinking of doing? Frankly your story is all but incredible but here you are as proof of it and you don't seem to be robots except in appearance."

"Oh, boy!" whispered Murray to Gloria. "Wait till these babies get after the birds with their eight-inch guns. They'll wish they'd never heard of us. I'm glad I'm going to be on hand to see the fun."

"Yes, but maybe the birds will have something up their feathers, too," she replied. "I wouldn't like to place any bets. We thought we had them licked when we got the destroyer and now look at us."

"Well, I'm willing to try an attack, or at least a reconnaissance of them," said the captain. "Just now we're in the position of an armed exploring party. The Australian government has sent out several ships to see what it could find on the other continents."

"After the comet struck all the cables went dead. We got into radio communication with the Dutch colonial stations at Baravia and later with South Africa, but the rest of the world is just being re-explored and my commission authorizes me to resist unfriendly acts. I think

you could call an incendiary bomb an unfriendly act."

HIS eyes twinkled over this mild witticism and the party broke up with a scraping of chairs. A couple of hours later the blue line of Sandy Hook was visible, then the vague cliffs of the New York skyscrapers. The clouds had cleared away after the rain of the last few days. Not even a speck of mist hung in the air and everything stood out bright and clear.

The colonists felt a pang of emotion grip them as they watched the tall towers of the city rise over the horizon, straight and beautiful as they had always stood, but now without a sign of life or motion, all the busy clamor of the place hushed forever.

Of the tetrapteryxes or "dodos" as the Australian had called them there was no sign. The sky bent high, unbrokenly blue, not a flicker of motion in it. Murray Lee felt someone stir at his side and looked round.

"Oh, blast!" said Gloria Rutherford. "It's so beautiful that I want to cry. Did you ever feel like that?"

He nodded silently. "And those birds—isn't it a shame somehow that they should have the most beautiful city in the world?"

The shrill of a whistle cut off his words. With marvelous, machine-like precision, the sailors moved about the decks. The *Brisbane* lost way, came to a halt and there was a rush of steel as the anchor ran out. Captain Entwhistle came down from the bridge.

"I don't see anything of your dodos yet," he said. "Do you think it would be wise to send out a landing party, Mr. Ruby?"

"Most certainly not," said Ben. "You don't know what you're up against yet. Wait till they come around. You'll have plenty to do."

The captain shrugged. Evidently he was not at all unwilling to match the Australian navy against any-

thing the dodos might do. "Very well, I'll accept your advice for the present, Mr. Ruby. It is near evening in any case. But if there is no sign of them in the morning I propose to land and look over the city."

The landing was never accomplished.

In the middle of the night as Ben, Murray and Gloria were seated in the chartroom of the ship, chatting with the young lieutenant on duty there, there came a quick patter of feet on the deck, and a shout of "Light, ho!"

"There are your friends now, I'll wager," said the lieutenant. "Now watch us go get 'em. If you want to see the fun better go up on the bridge. All we do here is wrestle slide-rules."

Hastily the three climbed the bridge, where a little group of officers were clustered. Following the direction in which they were looking they saw, just above the buildings on the Jersey shore, what looked like a tall electric sign, burning high in the air and some distance away with no visible means of support.

"What do you make of it?" asked Captain Entwhistle, turning and thrusting a pair of glasses into Ben's hands. Through them he could read the letters. Printed in capitals, though too small to be read from the ship with the naked eye, he saw:

SOFT MEN EXIT. HARD MEN ARE WORKERS BELONGING. MUST RETURN. THIS MEANS YOU.

"Looks like a dumb joke by someone who doesn't know English very well," he opined, passing the glasses to Gloria. "I don't think those birds would figure that out anyway."

"Wait a minute though," said Gloria as she read the letters. "Remember they caught Dangerfield and Farrelly and the rest. Maybe they taught them how to speak."

"Yes, but those two didn't know anything about 'soft men.' It's all crazy, like tweedledum and tweedledee. And what do they mean by 'be-

longing?' None of our gang thought up that bright remark."

"Look, sir," said one of the younger officers, "it's changing."

Abruptly the lights were blotted out, to reappear amid a swimming of colors, nearer and larger.

WARNING, they read this time, FLY AWAY ACCURSED PLACE.

"What beats me," said Ben, "is what makes that light. I'll bet a dollar against a dodo-feather it isn't electrical and fireworks wouldn't hang in the air like that. How do they do it?"

"Well, we'll soon find out," said the Captain, practically. "Mr. Sturgis, switch on searchlights three and four and turn them on the source of that light."

A FEW quick orders and two long beams of light leaped out from the ship toward the source of the mysterious sky-writing—leaped but not fast enough. For even as the searchlights sought for their goal the lights were extinguished and the long beams swung across nothing but the empty heavens.

Gloria shivered. "I think I want to go away from this place," she said. "There's too much we don't know about around here. We'll be getting table-tappings next."

"Apparently someone wants us to clear out," said Captain Entwhistle cheerfully. "Mr. Sturgis, get steam on three boilers and send the men to reserve action stations. We may have something doing here before morning."

Orders were shouted, iron doors slammed and feet pattered in the interior of the warship. From their station on the bridge Ben, Gloria and Murray could see the long shafts of the turret guns swing upward to their steepest angle, then turn toward the Jersey shore. The *Brisbane* was preparing for emergencies.

But there was to be no fight that night, though all night long the weary sailors stood or slept beside their guns. The dark skies remained

inscrutable. The mysterious lights did not reappear.

At four o'clock Captain Entwhistle retired, reappearing at eight, fresh as though he had slept through the whole night. The colonists, of course, did not need sleep but while the sailors stared at them, submitted themselves to an electric meal from one of the ship's dynamos.

Morning found them gathering about the upper decks, eager for action, particularly McAllister, who had spent most of the night engaged in highly technical discussions of the *Brisbane's* artillery with one of the turret-captains.

"What do you suggest?" asked the captain. "Shall we land a party?"

"I hate to go without taking a poke at those birds," said Ben, "but still I don't think it would be safe."

"What's the matter with that airplane?" asked Gloria, pointing to the catapult between the funnels, where a couple of blue-visaged sailors had taken the covering from a seaplane and were giving it a morning bath.

The captain looked at Ben. "There may be something in that idea. What do you say to a scout around? I'll let you or one of your people go as an observer."

"Tickled to death," Ben replied. "We never got beyond the upper part of the city ourselves. The dodos were too dangerous. I'd like to find out what it's all about."

"How about me?" offered Gloria.

"Nothing doing, kid. You get left this time. If those birds get after us we may land in the bay with a bump and I don't want this party to lose its little sunshine."

"Up anchor!" came the command. "Revolutions for ten knots speed. I'm going to head down the bay," he explained to the colonists. "If anything happens I want to have sea-room, particularly if they try bombing us."

Fifteen minutes later, with the *Brisbane* running into the morning land-breeze in an ocean smooth as

glass, the catapult let go and Ben and the pilot—a lad whose cheeks must have been rosy before the comet but were now a vivid blue—were shot into the air.

Beneath them the panorama of New York harbor lay spread—more silent than it had been at any day since Hendrick Hudson brought his high-pooped galleys into it. As they rose Ben could make out the line of the river, shining through the pearly haze like a silver ribbon.

The towers of the city tilted, then swung toward them as the aviator swept down nearer for an examination. Everything seemed normal save at the north and east, where a faint smoky mist still lingered over the buildings they had occupied. Of birds or of other human occupation than their own there was no slightest sign.

A faint shout was borne to his ears above the roar of the motor and he saw the pilot motioning toward a set of earphones.

"What do you say, old chap?" asked the pilot when he had clamped them on. "What direction shall we explore?"

Ben glanced down and around. The cruiser seemed to hang in the water, a tiny droplet of foam at her bow the only sign she was still in motion. "Let's go up the Hudson," he suggested. "They seemed to come from that direction."

"Check," called the pilot, manipulating his controls. The airplane climbed, swung and went on. They were over Yonkers. Ben could see a river steamer at the dock, where she had made her last halt.

"Throw in that switch ahead of you," came through the earphones. "The one marked RF. That's the radiophone for communicating with the ship. We may need it."

"Okay," said Ben. "Hello. . . . Yes, this is Ruby in the plane. Nothing to report. Everything serene. We're going to explore further up the river."

In the distance the Catskills

loomed before them, blue and proud. Ben felt a touch on his back and looked round. The pilot evidently wished to say something else. He cut in and heard, "What's that off on the left—right in the mountains? No, there."

Following the indicated direction Ben saw something like a scar on the projecting hillside—not one of the ancient rocks but a fresh cut on the earth as though a wide spot had been denuded of vegetation.

"I don't know," he answered. "Never saw it before. Shall we go see? . . . Hello, *Brisbane*. Ruby reporting. There is a mysterious clearing in the Catskills. We are investigating."

CHAPTER VIII

THE DODOS ARE BOMBING

THE bare area seemed to run all down a long valley and spread out as it rounded the crest of a hill which hid what lay behind it from their view. As they watched a grey speck that might have been an ant at that height and distance lumbered slowly down the valley. Then Ben noticed a tiny flicker of red light, so bright as to be clearly visible even in the day, where the grey speck moved against the hillside. A door seemed to open in the hillside.

Focusing the glasses the aviator handed him he could just make out a square bulky object that trundled forth. And then one—two—three—four—five of the huge dodo-tetrapteryx birds shot out, poised for a moment, leaped into flight.

"Hello, *Brisbane*," called Ben into the radiophone. "Five dodos have taken off from the cutting in the hills. I think they are after us. Better turn back this way and get ready for trouble."

The aviator, understanding without being warned, had turned the

plane. Ben swung round to look over his shoulder. The dodos were already some yards in the air. Behind them the bulky object was running slowly out of the opening in the hillside. It had the appearance of a very long flexible cannon. As he held his glasses on it it stopped, straightened out and the muzzle was elevated in their direction.

"Dive!" he shouted suddenly into the voice tube, entirely on impulse.

The plane banked sharply and seemed to drop straight down. At the same instant, right through the spot where they had just passed, shot a beam of light so brilliant that it outshone the morning sun. There was a roar louder than that of the motor. The plane pitched and heaved in the disturbed air and the light-beam went off as suddenly as it had snapped on.

"Didn't I tell you those babies were poison?" he remarked. "Boy, if that ever hit us!"

"What was it?" asked the aviator.

"Don't know but it was something terrible. Let's head for home and mamma. I don't care about this."

The plane reeled as the pilot handled the controls. The light-beam shot out again, just to one side this time. Out of the corner of his eye Ben could see one of the birds—gaining on them!

"How do you work this machine-gun?" he asked.

"Just squeeze the trigger. Look out! I'm going to dive her again."

With a roar the light-beam let go a third time. Ben saw the edge of it graze their right wingtip. The airplane swung wildly round and down, the pilot fighting for control.

The earth seemed to rush up to meet them, tumbling, topsy-turvy. Ben noted a warped black spot where the beam had touched the wingtip, then, surprisingly, they were flying along, level with the surface of the Hudson beneath them and hardly a hundred feet up.

"That was close," came the aviator's voice, shaky with relief. "I

thought they had us that time. That's quite a ray they have."

"It sure is one first-class heller," agreed Ben. "Are you far enough down to duck it now?"

"I think so unless they can put it through the hills or chase us with it. Do you suppose those dodos thought that up themselves?"

"Can't tell. They're right on their toes though. Look!" He pointed up and back. Silhouetted against the sky they could see three of them, flying in formation like airplanes. "Can we make it?"

"I'm giving the old bus all she'll stand. The *Brisbane* will come toward us though. Wait till those guys get going. They'll find we can take a trick or two."

Yonkers again. Ben looked anxiously over his shoulder. The three silhouettes were a trifle nearer. Would they do it? One Hundred Twenty-fifth Street and the long bridge swung into view, then Riverside Drive and the procession of docks with the rusting liners lying beside them.

Ben waggled the machine-gun, tried to adjust its sights and squeezed the trigger. A little line of smoke-puffs leaped forth. Tracer bullets—but nowhere near the birds. On and on—lower New York—the Battery.

Wham! The water beneath and behind them boiled. Ben looked up. The birds were above them, too high to be reached, dropping bombs.

"All right, old soaks," he muttered, "keep that up. You'll never hit us that way."

Again something struck the water beneath them. The airplane pitched and swerved as the pilot changed course to disturb the aim of the bombers. In the distance the cruiser could be seen now, heading toward them. As he watched there was a flash from her foredeck. Up in the blue above them appeared the white burst of a shell, then another and another.

One of the dodos suddenly dived

out of the formation, sweeping down more swiftly than Ben would have believed possible. He swung the gun this way and that, sending out streams of tracers, but the bird did not appear to heed.

Closer—closer—and then with a crash something burst right behind him. The airplane gyrated—the water rushed upward. The end he thought and wondered inconsequentially whether his teeth would rust. The next moment the water struck them.

WHEN Ben Ruby came to, he beheld a ceiling which moved jerkily to and fro and stared lazily at it, wondering what it was. Then memory returned with a snap. He sat up and looked about him. He was in one of those cubbyholes which are called cabins on warships, alone.

Beneath him he could hear the steady throb of the engines. At his side was a small table with a wooden rack on it. In one compartment stood a glass, whose contents on inspection proved to be oil. He drank it, looked at and felt of himself. Finding nothing wrong he got out of the hammock and stepped to the door. A seaman was on guard in the corridor.

"Where is everybody?"

"On deck, sir. I hope you are feeling all right now, sir."

"Top of the world, thanks. Is the aviator okay?"

"Yes, sir. This way."

He ascended to the bridge, to be greeted riotously by the assembled company. The *Brisbane* was steaming steadily along in the open sea with no speck of land in sight and no traces of the giant birds.

"What happened?" Ben asked. "Did you get rid of 'em?"

"I think so. We shot down two and the rest made off after trying to bomb us. What did you two find out?"

Ben briefly described their experiences. "I thought there was something wrong with one of your wing-

tips," said the captain, "but your plane sank so quickly after being hit that we didn't have time to examine it. That light-ray cannon of theirs sounds serious. Do you suppose the dodos managed it?"

"Can't tell," said Ben. "From what I could make out through the glasses it didn't look like birds that were handling it."

"But what could they be?"

"Ask me! Delirium tremens, I guess. Nothing in this world is what it ought to be any more. Where did those birds come from—how did we get this way, all of us—who is it up there in the Catskills that don't like me? Answer me those and I'll tell you who was handling the gun."

"Message, sir," said a sailor, touching his cap and offering a folded paper. The captain read it, frowning.

"There you are." He extended the sheet to Ben. "My government is recalling all ships. Our sister-ship, the *Melbourne*, has been attacked off San Francisco and severely damaged by bomb-dropping dodos and they have made a mass descent on Sumatra. Gentlemen, this has all the characteristics of a formal war."

He strode off to give the necessary orders to hurry the cruiser home but Walter Beeville, who had joined the group at the bridge, said under his breath, "If those birds have enough intelligence to plan out anything like that I'll eat my hat."

* * * * *

"If you were not before my eyes," said Sir George Graham Harris, president of the Australian Scientific Commission, "as living proof of what you say and if our biological and metallurgical experts did not report that your physiology is utterly beyond their comprehension I do not know but that I would believe you some cleverly constructed machines, actuated in some way by radio."

"However, that is not the point.

I have here a series of reports from different quarters on such explorations as have been made since the arrival of the comet and our recovery from its effects. We are, it appears, confronted with a menace of considerable gravity in the form of these birds.

"In the light of your closer acquaintance with them and with conditions generally in the devastated areas they may be more suggestive to you than to us." He stopped and ruffled over the papers piled beside him at the big conference table.

He was a kindly old gentleman, whose white Van Dyke and pale blue lips contrasted oddly with the almost indigo tint of his visage. Before the comet it had been a rich wine-red, the result of a lifelong devotion to brandy and soda. Smiling round the table at his scientific colleagues and at Ben, Murray, Gloria and Beeville, who occupied the positions of honor, he went on.

"I give you mainly excerpts. The first is from the South African government. They have—hm, hm—sent an aerial expedition northward, all lines of communication appearing to be broken. At Nairobi, they report for the first time, finding a town entirely unoccupied and its inhabitants turned into cast-metal statues.

"Addis Ababa the same—Wadi Hafa likewise. Twenty miles north of Wadi Hafa they noted the first sign of life—a bird of some kind at a considerable distance to the west of them and flying parallel with them and very rapidly."

THE scientist looked up. "It would appear beyond doubt that this bird belonged to the species we call dodos and to which Dr. Beeville has given the excellent scientific name, *tetrapteryx*."

"As the expedition proceeded northward, they encountered more of them—sometimes as many as four being in sight at one time. At Alexandria, where they halted for

supplies, the dodos closed in. When the expedition took the air again with the object of flying to Crete and thence to Europe these remarkable avians came very close, apparently trying to turn the expedition back.

"They reached Crete that afternoon in spite of the interference of the birds but that night were actively attacked on the ground. The phenomena that accompanied all other attacks were observed. The birds used incendiary bombs of great intensity. One machine was entirely destroyed with its aviators. The others, since their object was exploration, at once took to the air and returned.

"Any comments, gentlemen? No? Well, the next is the report of the Dutch ship *Corlaer*, which attempted to reach Japan. She was permitted to proceed to within a few miles of the islands and then began to receive light-warnings in the sky such as Captain Entwhistle reports. Unfortunately they were in Japanese characters and there was no one aboard who could read them.

"She put in at the port of Nagasaki and sent out a landing party. It never returned. As in the other cases the ship was bombed at night and only made Sumatra with the greatest difficulty, one of the bombs having fallen on the quarterdeck, wrecking the steering-gear and causing extensive internal damage.

"There are minor reports with which I will not bother you. But the report of H.M.A.S. *Melbourne* appears highly significant. She touched at several South American ports. In the cities she reports finding all life at a standstill, although at Iquique the landing party encountered some hill-Indians who had suffered a bluing of the blood similar to ours and who proved distinctly unfriendly. They are reported as engaged in looting the city and getting drunk on the contents of the bodegas.

"North of Callao she found no signs of life until she reached San

Pedro Bay. There a man was observed to be waving from the beach. The *Melbourne* put in and launched a boat. Before it reached shore one of the birds made its appearance overhead and the man disappeared into the trees and was not seen again.

"Shortly afterward, the *Melbourne* began to see the dodos constantly and at the region of San Francisco she saw one of the light signals. The wording of it was DEPART AWAY FAREWELL FOREVER.

Gloria stirred and Sir George looked at her with mild eyes. "Nothing, sir. I was just thinking that these dodos are uncommonly poetical. They told us to fly from the accursed place."

"Yes, yes. Naturally the *Melbourne*, not anticipating any trouble as the result of a refusal to obey this absurd command, did not heed the warning and steamed into the bay. Like the other ships she was attacked at night. One of the bombs fell on the fire-control station and wrecked it, bringing down the tripod mast and fusing the top of the conning tower.

"She got under way immediately and replied with all guns but before escaping number three turret was struck by another bomb and all the men in the turret were killed. The roof of the turret was driven in and even the breeches of the guns melted.

"That, I think, summarizes the reports we have. We have seen a few of the birds, mostly at a distance, and they appear to have carried off several individuals, especially in Sumatra. I am afraid that is all we can offer."

There was a moment's silence.

"Well, what the material in the bombs is I can't say," said Ben, "but they know all about projecting it from guns in the form of a beam. I told you about my experience in company with the aviator from the *Brisbane*?"

"The eggs Roberts found too," said Gloria.

"Oh yes, Dr. Beeville can tell you about that."

"WHY, there's nothing much to it," said the scientist. "One of our people found what appeared to be a nest of these birds in a building. The nest was built of soft cloths and contained large eggs but when the place was revisited the eggs had been removed."

"I may say that I have examined the remains of one rather badly mangled specimen. The brain-case is extraordinarily large—larger than I have ever seen in any animal—and they appear to be of a high order of intelligence."

"On the other hand I should certainly put the use and control of such material as these bombs contain beyond their powers. And the fact that the nest was found in a building would indicate that the headquarters in the Catskills were used by some other and higher intelligence, which was separate from and perhaps in control of these birds."

"Moreover, they do not appear to wish to destroy us mechanical men but to carry us off. The messages seen by the ships seem to indicate that the intelligence behind these birds is capable of reading and understanding English. I cannot conceive that the birds themselves would be able to do this."

"Further, there is the very strong evidence of the gun which fired on Mr. Ruby. In every case where these birds have attacked man they have used bombs of this material put up in portable form, although the gun would have been much more effective. It would have gone right through the *Melbourne* or the *Brisbane* like a red-hot poker through a board."

"From this I argue that the birds are directed rather than directing and that the directing intelligence is either too indolent or too contemptuous of us to attack man except through their agency. Finally

I deduce that we are dealing with some powerful and as yet unknown form of life. What it is or how it reached the earth I am not prepared to say."

"Wunnerful," said Gloria irreverently and a smile passed across the faces of the conferees.

"But what are the bombs made of and what makes them tick?" asked Murray Lee.

"That is a question to which I would very much like to know the answer," said Sir George, stroking his white beard. "Perhaps Mr. Nasmith, our chemical member, will be good enough to give us something on the point."

"Not much," said Nasmith, a lantern-jawed man with black hair. "We made a chemical analysis of the portions of the *Melbourne* which were struck by the bombs and all we can say is that it gave a most extraordinary result. These portions were originally made of Krupp armor steel as you know. Our analysis showed the presence of a long series of chemical elements, including even gold and thorium, most of them in minute quantities. Titanium appeared to be the leading constituent after iron."

"Then," said Sir George, "the situation appears to be this—we don't know what the dodos are or what is behind them but they have possession of a large part of the world to which they are disposed to forbid us any access."

"They have powerful weapons and the intelligence to use them and they appear to be unfriendly. I suggest that the judgment of this meeting be that the government take immediate measures of investigation and, if necessary, of hostility."

"Swell," said Gloria, "only you didn't go half far enough. We've been there and you haven't. You want to get the best guns you've got and go for them right away."

There was a murmur of approval. As Sir George rose to put the question to a vote there came a knock

at the door. Heads were turned to greet a young man who hurried to the president and whispered something. Sir George turned to the meeting with a startled face.

"Ladies and gentlemen," he said, "the dodos are bombing Canberra, the capital of Australia, and are being engaged by the Royal Australian Air Force."

CHAPTER IX

THE OPENING OF THE CONFLICT

"I'M glad," said Gloria to Murray Lee as they leaned against the rail of the steamer *Paramatta* in their new American Army uniforms, "that they're going to attack these things in the old U. S. I'd hate like anything to think we last Americans were shoved out of our country by a lot of chickens."

Murray glanced around him. In every direction the long lines of the convoy stretched out, big liners loaded to the funnels with men, guns, tanks and ammunition. On the fringes of the troopships the sleek grey sides of the cruisers and destroyers that protected them were visible. Overhead there soared an armada of fast planes—no mere observation machines or peaceful explorers like the South Africans but fierce deadly fighting planes, rocket-powered, which could step along at ten miles a minute and climb, dive and maneuver better than a dodo.

He nodded. "You said something, sister. Won't it be great to take a whack at them under the Stars and Stripes. I'm glad they let us do it even if there are only fourteen of us."

In the four months since the conference with the Australian Scientific Committee it had been amply demonstrated to the three remaining governments of the world that there was not room for both man

and dodos on the same planet.

A carefully-worked out campaign had evidently been set in operation by whatever central intelligence led the four-winged birds with the object of wiping human life from the earth. The bombing of Canberra was merely the first blow.

While Australia was arming and organizing to meet the menace the second blow fell—on Surabaya, the great metropolis of Java, which was wiped out in a single night. At this evidence of the hostile intentions of the dodos, radio apparatus began to tap in Australia, in the Dutch colonies and in South Africa. Old guns forgotten since the last great war, were wheeled out. Factories began to turn out fighting planes and young men drilled in the parks.

When, late in November, a flock of twenty-five dodos was observed over north Australia, headed for Sydney, the forces of the defense were on their guard. Long before the birds reached the town they were met by a desperate battle over the desert, claw and beak and bomb against machine-gun. They were shot down to the last bird. With that the attacks had suddenly ceased and the federated governments, convinced that it was but the calm before a greater storm, had gathered their strength for a trial of arms.

It was realized that whatever lay behind this attempt to conquer all that was left of the old earth must be in some way due to the coming of the great comet and must center somewhere in America, where the comet had struck. So for the first time the race of man began to learn what international cooperation meant.

Delegates from the three surviving governments met in conference at Perth with Ben Ruby accorded a place as the representative of the United States. The decision of the conference was to mobilize every man and weapon to attack the birds in America and exterminate them there if possible. If unable to do

this, then to keep them so occupied at home that they would be unable to deliver any counter-attack.

There was plenty of shipping to carry an army far larger than that the federated governments could mobilize. The main weakness of the expedition lay in the lack of naval protection, for the great navies of the world had perished when the northern hemisphere passed under the influence of the comet.

It was sought to make up for this deficiency by a vast cloud of airplanes, flying from the decks of many merchant ships converted into carriers, though some of the new rocket-planes were powerful enough to cruise around the world under their own power.

And so, on this March morning in 1957 the whole vast armada was crossing the Atlantic toward the United States. In view of the fact that the headquarters of the dodos seemed to be somewhere in the Catskills it had been decided to land in New Jersey, form a base there and work northward.

In the preliminary training for the coming conflict the metal Americans had played an important part. Their construction made them impossible as aviators, which they would have preferred. But quite early it was discovered that they made ideal operators for tanks. The oil fumes and the lack of air did not in the least affect beings to whom breathing had become unimportant and the oil was actually a benefit.

As a result the little American army had been composed of fourteen tanks of special type, fitted at the direction of the military experts with all the latest and best in scientific devices. They were given extra-heavy armor, fitted in two thicknesses, with a chamber between as protection against the light-bombs, and each tank, built to be handled by a single operator, was provided with one heavy gun, so arranged that it could be used against aerial attack.

A STIR of motion was visible at the head of the convoy. A destroyer dashed past the *Paramatta*, smoke pouring from her funnels, white bow-wave rising high at her bridge as she put on full speed. From the airplane carrier just behind them in the line, one, two, three flights of fighters swung off, circled a moment to gain altitude, then whirled off to the north and west.

"What is it?" asked Gloria.

A sailor touched his cap. "Sighted a dodo, I believe, miss," he said.

"Oh boy!" said Gloria. "Here we go. What would you give to be in one of those planes?"

They craned their necks eagerly but nothing was visible except a few flecks in the sky that might be dodos or might equally well be airplanes. Faint and faraway, a rattle of machine-guns drifted down. There was a flash of intense light like the reflection in a far-distant mirror and the machine-guns ceased. A few moments later the airplanes came winging back to their mother ship. A sailor on her deck began to swing his arms in the curious semaphore language of the sea.

"What happened?" asked Gloria of the man by their side.

"I'm trying to make out, miss. One dodo, he says, carrying a bomb—hit—by—machine-gun—oh! The bomb went off in the dodo's claws and blew him all to pieces."

The echo of a cheer came across the water from the other ships. The first brush had gone in favor of the race of man!

That night dodos announced their presence by a few bombs dropped tentatively among the ships. They did no damage, being hurried and harried by the airmen, and by morning the dream-towers of Atlantic City, flecked by the early morning sun, rose out of the west.

Far in the distance the aviators of the expedition had spied more of the birds but after the first day's encounter with the airplanes they kept a healthy distance, apparently

contented to observe what they could.

As ship after ship swung in toward the piers and discharged its cargo of men, guns and munitions the birds became bolder, as though to inspect what was going on. But the Australian aviators attacked them fiercely, driving them back at every attempt to pierce the aerial umbrella, and when night came on nearly a third of the force had been landed and quartered in parts of the one-time pleasure city.

Covered by the darkness a few dodos came down to drop bombs that night. They met with poor success. Delicate listening apparatus, intended originally to pick up the sound of approaching enemy airplanes had been one of the first things landed.

The whir of the birds' wings was plainly audible and before they had realized that man had a weapon to meet their night attacks half a dozen of them had been caught in the bursts of anti-aircraft guns and more had been met and shot down by the night-patrolling airmen.

The next morning saw the unloading beginning anew while the emptied transports were taken around into Delaware Bay. Fortunately the weather continued unusually fine for late March, bright with sunshine, giving the dodos no opportunity to attack behind the cover of clouds. There was just enough cold in the air to make the Australians and South Africans lively though the Americans found the temperature caused the oil to move sluggishly in their metallic joints.

At daybreak the whole American unit had been pushed out to the railroad line at Greenwood with the advance guard of tanks. Finding no opposition they continued on to Farmington, where there was an airport that would serve for the leading squadrons of planes.

"Do you know," said Ben to Murray, "I wish those dodos would show a little more pep. Fighting them is

no cinch. We're a little ahead of the game now but it's largely because they've let us alone and haven't brought up any of those light-beam guns."

"Maybe we've got 'em on the run," replied Murray. "You can't tell when anyone will develop a yellow streak, you know."

"Yes, but we've seen enough of these babies to know they haven't got a yellow streak a millimeter wide in their whole make-up. Yet here they let us do just about as we please. Makes me think they're just laying for us and when they get us where they want us—zowie!"

"Mebbe so, mebbe so," replied Murray. "Beeville still thinks it isn't the birds at all—that they've got a big boss somewhere running the whole works and till we find out what's behind it we're fighting in the dark. Well, they'll unload the rest of the army tomorrow and then we'll get down to cases."

THE country between Atlantic City and Philadelphia is flat with a few gentle elevations, dotted with small towns, farms and bits of woodland. In the cold spring morning of the next day, with rain portended, the army of the federated governments pushed out along the roads like a huge many-headed snake, tanks and airplanes in the lead, steady ranks of infantry and the big guns coming behind.

Back at Atlantic City all machine-shops and factories had been set in operation and wrecking crews were already clearing the railroads and mounting huge long-range guns on trucks, preparatory to covering the advance. All along the route was bustle and hurry. Camp kitchens rumbled along, harassed officers tore up and down the lines in their jeeps and messengers rushed to and fro on popping motorcycles.

Out with the advance the American division of fourteen tanks rolled along. The dodos seemed to have completely disappeared, even the

scouting aviators far ahead reporting no sign of them. The army was succeeding in establishing itself on American soil.

But around noon a stop signal flashed on the control boards of the tanks. They halted at the crest of a little rise and climbed out to look around.

"What is it?" asked someone.

"Perhaps gentlemanly general wishes to disport in surf," suggested Yoshio, with his flashing, steel-toothed smile, "and proceeding is retained without presence."

"Perhaps," said Gloria. "But I'll bet a dollar to a handful of blue kangaroos that the dodos are getting in theiricks somewhere."

"Well, we'll soon know," said Murray Lee. "Here comes a dispatch rider."

The man on the motorcycle dashed up, saluted. "General Ruby?" he inquired and handed the dispatch to Ben. The latter read it, then motioned the others about him.

"Well, here it is, folks," he said, "Listen to this—'General Grierson to General Ruby. Our flank guard was heavily attacked at Atsion this morning. The Third Brigade of the Fourteenth Division has suffered heavy casualties and has been forced back to Chew Road. We are bringing up heavy artillery. The enemy appear to be using large numbers of light-ray guns. Advance guard is recalled to Waterford in support of our left flank.'"

"Oh—oh," said somebody.

"I knew they'd start giving us hell sooner or later," remarked Murray Lee as he climbed into his tank.

At Waterford there was ordered confusion when they arrived. Just outside the town a long line of infantrymen were plying pick and shovel in the formation of a system of trenches. Machine-gun units were installing themselves in stone or brick buildings and constructing barricades around their weapons. Line after line of tanks had wheeled into position under cover of woods

or in the streets of the town, light-weights out in front, fast cruiser-tanks behind them and the lumbering battle-tanks with their six-inch guns farther back.

Artillery was everywhere, mostly in little pits over which the gunners were spreading green strips of camouflage. As the American tanks rolled up a battery of eight-inch howitzers behind a railroad embankment at the west end of the town was firing slowly and with an air of great solemnity at some target in the invisible distance, the angle of their muzzles showing that they were using extreme range.

A couple of airplanes hummed overhead. But of dead or wounded, of dodos or any other enemy there was no sign. It might have been a parade-war, an elaborately realistic imitation of the real thing for the movies. Guides directed the Americans to a post down the line toward Chew Road.

"What's the news?" asked Ben of an officer whose red tabs showed he belonged to the staff.

"They hit the right wing at Atsion," replied the officer. "Just what happened I'm not sure. Somebody said they had a lot of those light-ray guns and they just crumpled up our flank like that." He slapped his hands together to show the degree of rumpling the right flank had endured. "We lost about fifteen hundred men in fifteen minutes. Tanks, too. But I think we're stopping them now."

"Any dodos?" asked Ben.

"Just a few. The airplanes shot down a flock of seven just before the battle and after that they kept away. What is it? General Witherington wants me? Oh, all right, I'll come. Excuse me, sir," and the staff officer was off.

MOST of the afternoon was spent in an interminable period of waiting and watching the laboring infantry sink themselves into the ground. About four o'clock a

fine cold drizzle began to fall. The Americans sought the shelter of their tanks and about the same time their radiophones flashed the order to move up toward the north and east, through a barren pasture with a few trees in it, to the crest of a low hill.

It was already nearly dusk. The tanks bumped unevenly over the stony ground, their drivers following each other by the black silhouettes in the gloom. Off to the right a battery suddenly woke to a fever of activity, then as rapidly became silent. In the intervals of silence between the motor-sounds the Americans could catch the faint rat-tat of machine-guns in the heavens above. Evidently dodos were abroad in the gloom.

At the crest of the hill they could see across a flat valley in the direction of Chew Road. Something seemed to be burning behind the next rise. A ruddy glare lit the clouds. Down the line guns began to growl again and the earth trembled gently with the sound of an explosion somewhere in the rear. Murray Lee, sitting alone at the controls of his tank, thought so this was war!

There were trees along their ridge and, looking through the side peephole of his tank, Murray could make out the vague forms of a line of whippets among them, waiting like themselves for the order to advance. We wondered what the enemy were like. Evidently not all dodos, since so many tanks had been pushed up to the front. This argued a man or animal that ran along the ground. The dodos seemed to spend most of their time in the air.

He was recalled from his meditations by the ringing of the attention bell and the radiophone began to speak rapidly.

"American tank division—enemy tanks reported approaching. Detain them as long as possible and then retire. Your tanks are not to be sacrificed. Radio your positions

with reference to Clark Creek as you retire for guidance of artillery registering on enemy tanks. There—"

The voice broke off in mid-sentence. So the dodos had tanks! Murray Lee snapped in his controls and glanced forward. Surely in the gloom along that distant ridge there was a darker spot—next to the house—something.

Suddenly, with a roar like a thousand thunders, a bolt of sheer light seemed to leap from the dark shape on the opposite hill, straight toward the trees where Murray had noticed the whippets. He saw one of the trees leap into vivid flame from root to branch as the beam struck it—saw a whippet, sharply outlined in the fierce glow, its front armor-plate caving. Then its ammunition blew up in a shower of sparks and he was frantically busy with his own controls and gun.

CHAPTER X

DESPAIR

ALL along the line of the American tanks the guns flamed. Flame-streaked fountains of dirt leaped up around the dark shape on the opposite hill and a burst of fire came from the farmhouse beside it as a misdirected shell struck it somewhere.

The beam from the unknown enemy snapped off suddenly as it had come on, leaving, like lightning, an aching of the eyes behind it. Murray Lee swung his tank round, making for the reverse slope of the hill to avoid the light-beam.

Crack! The beam came on again—right overhead this time. It flashed through the treetops leaving a trail of fire. He heard a torn branch bang on the roof of his tank, manipulated the gun to fire at the square of the beam and discovered

that the magazine was empty.

As he bent to snap on the automatic shell-feeding device, a searchlight from somewhere lashed out toward the black shape that opposed them, then went off. In the second's glimpse it afforded the enemy appeared as a huge polished fish-shaped object, its mirror-like sides unscarred by the bombardment it had passed through, its prow bearing a long prehensile snout—apparently the source of the light-beam.

Suddenly a shell screamed overhead and the whole scene leaped into dazzling illumination as it burst just between the enemy tanks and their own. It must be a shell from the dodos! The federated armies had no shells that dissolved into burning light like that. Then another and another, a whole chorus of shells, falling in the village behind them.

Murray had a better look at their opponent in the light. It seemed to lie flush with the ground. There was no visible means of either support or propulsion. It was all of twenty feet in diameter, widest near the head, tapering backward. The questing snout swung to and fro, fixed its position and discharged another of those lightning-bolts.

Off to the right came the answering crash as it caved in the armor of another of the luckless whippets. He aimed his gun carefully at the base of the snout and pulled the trigger. On the side of the monster there appeared a flash of flame as the shell exploded, then a bright smear of metal—a direct hit and not the slightest damage!

Ben Ruby's voice came through the radiophone, cool and masterful. "Pull out, folks, our guns are no good against that baby. I'm cutting off. Radio positions back to the heavy artillery. Put the railroad guns on."

Murray glanced through the side peephole again. One, two, three, four, five—all the American tanks

seemed undamaged. The monster had confined its attention to the whippets, apparently imagining they were doing the shooting. He pulled his throttle back, shot the speed up, rumbling down the hill, toward the village.

As he looked back darkness had closed in. The brow of the hill, its rows of trees torn and broken by the light-beam, stood between him and the enemy. Before him amid the flaring light of the enemy shells was a stir of movement. The troops seemed to be pulling out also.

The tanks rumbled through the streets of Waterford and came to a halt on a corner behind a stone church which held three machine-gun nests. Murray could see one of the gunners making some adjustment by the light of a pocket torch and a wave of pity for the brave man, whose weapon was as useless as a stick, swept over him.

A messenger dashed down the street, delivered his missive to someone, and out of the shadows a file of infantry suddenly popped up and began to stream back, getting out of range. Then, surrounded by bursts of artillery fire, illumined by the glare of half a dozen searchlights that flickered restlessly on and off, the strange thing came over the brow of the hill.

It halted for a moment, its snout moving about uneasily as though it were smelling out the way. As it did so it was joined by a second. Neither of them seemed to be in the least disturbed by the shells all the way from light artillery to six-inch, that were bursting about them, filling the air with singing fragments. For a moment they stood at ease.

Then the left-hand one, the one that had led the advance, pointed its snout at the village and discharged one of its flaming bolts. It struck squarely in the center of an old brick house, whose cellar had been turned into a machine-gun nest.

With a roar the building collapsed,

a bright flicker of flames springing out of the ruins. As though it were a signal every machine-gun, every rifle in the village opened fire on the impassive shapes at the crest of the hill. The uproar was terrific. Even in his steel cage Murray could hardly hear himself think.

THE shining monsters paid no more attention to it than to the rain. One of them slid gently forward a few yards, turned its trunk toward the spouting trenches and in short bursts loosed five quick bolts. There were as many spurts of flame, a few puffs of earth and the trenches became silent, save for one agonized cry of "First aid, for God's sake!"

Ben Ruby's voice came through the microphone. "Retreat everybody. Atlantic City if you can make it."

With a great round fear gripping his heart Murray Lee threw in the clutch of his machine and headed in the direction he remembered as that of the main road through the town toward Atlantic City. The night had become inky-black. The town was in a valley and the shadow of trees and houses made the darkness even more Stygian.

Only by an occasional match or flashlight glare could the way be seen but such light as there was showed the road already filled with fugitives. Some of them were helmetless, gunless, men in the last extremity of terror, running anywhere to escape from they knew not what.

But through the rout there plowed a little company of infantry, revealed in a shellburst, keeping tight ranks as though at drill, officers at the head, not flying but retreating from a lost battle with good heart and confidence, ready to fight again the next day.

The dancing beam of a searchlight picked them out for a moment. Murray Lee looked at them and the fear died within him. He slowed up his machine, ran it off the road and

out to the left, where there seemed to be a clearing that opened in the direction of the town. After all he could at least observe the progress of the monsters and report on them.

He was astonished to find that he had come nearly a mile from the center of the disturbance. Down there the glittering monsters, still brightly illumined by searchlight and flare, seemed to be standing still amid the outer houses of the town, perhaps examining the trench system the Australians had dug that afternoon. The gunfire had ceased.

From time to time one of the things, perhaps annoyed at the pointlessness of what it saw, would swing its trunk around and discharge a light-bolt at house, barn or other object. The object promptly caved in and, if it were wood, began to burn. A little train of blazing ruins marked the progress of the shining giants and threw a weird red light over the scene.

Now that he could see them clearly Murray noted that they were all of fifty or sixty feet long. Their polished sides seemed one huge mirror, bright as glass, and a phosphorescent glow hung about their tails. Along either side was a slender projection like the bilge-keel of a ship, terminating about three quarters of the way along, with a small dot of the phosphorescence at its tip.

They seemed machines rather than animate objects. Murray wondered whether they were or, remembering his own evolution into a metal man, whether they were actually metal creatures of some unheard-of breed.

As he watched a battery out beyond the town that had somehow got left behind opened fire. He could see the red flash-flash-flash of the guns as they spoke, hear the explosions of the shells as they rent the ground around the giants. One of them swung impassively toward the battery.

There were three quick stabs of

living flame, and the guns ceased firing. Murray Lee shuddered—were all men's resources, was all of man, to disappear from the earth? All his high hopes and aspirations, all the centuries of bitter struggle toward culture to be wiped out by these impervious beasts?

He was recalled from his dream by the flash of light at his control board and a voice from the radio-phone "... to all units," came the message. "Railroad Battery Fourteen about to fire on enemy tanks in Waterford. Request observation for corrections. . . . General Stanhope to all units. Railroad Battery Fourteen, twelve-inch guns, about to fire on enemy tanks in Waterford. Request observation for correction. . . ."

"Lieutenant Lee, American Tank Corps, to General Stanhope," he called into the phone. "Go ahead with Railroad Battery Fourteen. Am observing fire from east of town."

EVEN before he had finished speaking there was a dull rumble in the air and a tremendous heave of earth behind and to one side of the shining enemy not two hundred yards away.

"Lieutenant Lee to Railroad Battery Fourteen," he called delightedly. "Two hundred yards over, ten yards right."

Berrroum! Another of the twelve-inch shells fell somewhere ahead of the giants in the village.

As Murray shouted the correction one of the metal creatures lifted its snout toward the source of the explosion curiously and, as if it had not quite understood its meaning, fired a light-beam at it. Another shell fell, just to one side. A wild hope surging in him, he called the corrections—these were heavier guns than any that had yet taken a hand.

"Lieutenant Lee, American Tank Corps, to Railroad Battery Fourteen—suggest you use armor-piercing shell. Enemy tanks appear to

be armored," he called and had the comforting reply.

"Check, Lieutenant Lee. We are using armor-piercers."

Slam! Another of the twelve-inch shells struck, not ten yards behind the enemy. The ground around them rocked. One of them turned as though to examine the burst, the other lifted its snout skyward and released a long, thin beam of blue light, not in the least like the light-ray. It did not seem to occur to either of them that these shells might be dangerous. They seemed merely interested.

And then—the breathless watchers in the thickets around the doomed town saw a huge red explosion, a great flower of flame that leaped to the heavens, covered with a cloud of thick smoke, pink in the light of the burning houses.

As it cleared away there lay one of the monsters on its side, gaping and rent, the mirrored surface scarred, the phosphorescent glow extinguished, the prehensile snout drooping lifelessly. Murray Lee was conscious of whooping wildly, of dancing out of his tank and joining someone else in an embrace of delight. They were not invincible then. They could be hurt—killed!

"Hooray!" he cried. "Hooray!"

"That and twelve times over," said his companion.

That phrase struck him as familiar. For the first time he looked at his fellow celebrant. It was Gloria.

"Why, where in the world did you come from?" he asked.

"Where did you? I've been here all the time, ever since Ben ordered us home. Didn't think I'd run out on all the fun, did you? Are those things alive?"

"How do I know? They look it but you never can tell with all the junk that comet left around the earth. They might be just some new kind of tank full of dodos."

"Yeh, but—" The buzzing roar of one of the light-rays crashing into a clump of trees not a hundred

yards away recalled them to themselves. Gloria looked up, startled. The other monster was moving slowly forward, systematically searching the hillside with its weapon.

"Say, son," she said, "I think it's time to go away from here. See you at high mass."

But the conference at Headquarters in Hammonton that night was anything but cheerful. "It comes to this then," said General Grierson, the commander-in-chief of the expedition. "We have nothing that is effective against these dodo tanks but the twelve-inch railroad artillery, using armor-piercing shell and securing a direct hit.

"Our infantry is worse than useless. The tanks are useless. The artillery cannot get through the armor of these things although it damages the enemy artillery in the back areas."

Ben Ruby rubbed a metal chin. "Well, that isn't quite all, sir. One of the American tanks was hit and came through—damaged, I'll admit. The lightning or light-ray these dodos threw, penetrated the outer skin but not the inner. We could build more tanks of this type."

GENERAL GRIERSON drummed on the table. "And arm them with what? You couldn't mount a twelve-inch gun in a tank if you wanted to and we haven't any twelve-inch guns to spare."

One of the staff men looked up. "Has airplane bombing been tried on these—things. It seems to me that a one or two-thousand-pound bomb would be as effective as a twelve-inch shell."

"That was tried this afternoon," said the head of the air service with an expression of pain. "The one hundred and thirty-eighth bombing squadron attacked a group of these tanks. Unfortunately the tanks kept within range of their light-ray artillery and the entire squadron was shot down."

"Mmm," said the staff man. "Let's

add up the information we have secured so far and see where it leads. First they have a gun which shoots a ray that is effective either all along its length or when put up in packages like a shell and is rather like a bolt of lightning in its effect. Any deductions from that?"

"Might be electrical," said someone.

"Also might not," countered Walter Beeville. "Remember the *Melbourne's* turret. No electrical discharge would produce chemical changes like that in Krupp steel."

"Second," said the officer, "they appear to have three main types of fighting machines or individuals. First there are the dodos themselves. We know all about them and our airplanes can beat them—good.

"Second is their artillery—a large type that throws a beam of this emanation and a smaller type which throws it in the form of shells. Third, are these—tanks, which may themselves be the individuals we are fighting.

"They are capable of projecting these discharges for a short distance—something over four thousand yards—and apparently do not have the power of projecting it in a prolonged beam like their artillery. They are about fifty feet long, fish-shaped, heavily armored and have some unknown method of propulsion. Check me if I'm wrong at any point."

"The projection of these lightning-rays would seem to indicate they are machines," offered General Grierson hopefully.

"Not on your life," said Beeville. "Think of the electric eel."

"As I was saying," said the staff man, "our chief defect seems a lack of information and—"

General Grierson brought his fist down on the table. "Gentlemen!" he said. "This discussion is leading us nowhere. It's all very well to argue about the possibilities of man or machine in time of peace and at home but we are facing one of the

greatest dangers the earth has ever experienced and must take immediate measures.

"Unless someone has something more fruitful to develop than this conference has provided thus far I shall be forced to order the re-embarkation of what remains of the army and sail for home. My duty is to the citizens of the federated governments and I cannot uselessly sacrifice more lives. Our supply of railroad artillery is utterly inadequate to withstand the numbers of our adversaries. Has anyone anything to offer?"

There was a silence around the conference table, a silence pregnant with a heavy sense of defeat, for no one of them but could see the General was right.

But at the moment there came a tap at the door. "Come," called General Grierson. An apologetic under-officer entered. "I beg your pardon, sir, but one of the iron Americans is here and insists that he has something of vital importance to the General. He will not go away without seeing you."

"All right. Bring him in," he ordered.

There stepped into the room another of the mechanical Americans, a man neither Ben Ruby nor Beeville had ever seen before. A stiff wire brush of moustache stood out over his mouth. He wore no clothes but a kind of loin-cloth made apparently of a sheet. The metal plates of his powerful body glittered in the lamplight as he stepped forward. "General Grierson?" he inquired, looking inquiringly from one face to another.

"I am General Grierson."

"I'm Lieutenant Herbert Sherman of the U. S. Army Air Force. I have just escaped from the Lassans and came to offer you my services. I imagine your technical men might wish to know how they operate their machines and what would be effective against them and I think I can tell you."

CHAPTER XI

CAPTURE

HERBERT SHERMAN had wakened with a vague sense of something wrong and lay back in his seat for a moment, trying to remember. Everything seemed going quietly, the machine running with subdued efficiency. It came to him with a jerk—he could not hear the motor.

With the subconscious concentration of the flying man on his ship he glanced at the instrument board first and, taking in the astonishing information that both the altimeter and the air-speed meter registered zero, he looked over the side. His vision met the familiar dentilated line of the buildings surrounding the Jackson Heights airport with a tree plastered greenly against one of them. Queer.

His sense of memory began to return. There was the night-mail flight from Cleveland, the spot of light ahead that grew larger and larger like the most enormous of shooting stars, the sensation of sleepiness. He remembered setting the controls to ride out the short remainder of the journey with the automatic pilot on the Jackson Heights radio beam, since he was clearly not going to make Montauk. But what came after that?

Then another oddity struck his attention. He recalled very clearly that he had been flying over the white landscape of winter—but now there was a tree in full leaf. Something was wrong. He clambered hastily from the cockpit.

As he swung himself over the side his eye caught the glint of an unfamiliar highlight on the back of his hand and with the same stupefaction that Murray Lee was contemplating the same phenomenon several miles away he perceived

that, instead of a flesh-and-blood member, he had somehow acquired an iron hand. The other was the same—and the arm—and the section of stomach which presently appeared when he tore loose his shirt to look at it.

The various possibilities that might account for it raced through his mind, each foundering on some fundamental difficulty. Practical joke — imagination — insanity — what else? Obviously some time had elapsed. But how about the ground staff of the airport? He shouted. No answer.

Muttering to himself he trudged across the flying field, noting that it was grown up with daisies and far from newly rolled, to the hangars. He pounded at the door, then tried it. It was unlocked. Inside someone sat tilted back in a chair against the wall, a cap pulled over his face. Sherman walked over to the sleeper, favoring him with a vigorous shake and the word, "Hey!"

To his surprise the stranger tilted sharply over to one side and went to the floor with a bang, remaining in the position he had assumed. Sherman, the thought of murder jumping in his head, bent over, tugging at the cap. The man was metallic as himself but with a difference—he was solid statue cast in what seemed to be bronze.

"For Heaven's sake!" said Herbert Sherman to himself and the world at large.

There seemed to be nothing in particular he could do about it. The man, if he had ever been a man, and was not part of some elaborate scheme of flummery fixed up for his benefit, was beyond human aid. However there was one way in which all difficulties could be solved. The sun was high and the town lay outside the door.

He spent a good deal of the day wandering about Jackson Heights, contemplating such specimens of humanity as remained in the streets,

fixed in the various ungraceful and unattractive attitudes of life. He had always been a solitary and philosophical soul and he felt neither loneliness nor overwhelming curiosity as to the nature of the catastrophe which had stopped the wheels of civilization.

He preferred to meditate on the vanity of human affairs and to enjoy a sense of triumph over the ordinary run of bustling mortals who had always somewhat irritated him. In justice to Herbert Sherman it should be remarked that he felt no trepidation as to the outcome of this celestial joke on the inhabitants of the world. Besides being an aviator he was a competent mechanic.

He proved the ease with which he could control his new physique by sitting down in a restaurant next to the bronze model of a sleepy cat, removing one shoe and sock and proceeding to take out and then replace the cunningly concealed finger-nut which held his ankle in position, marveling at how any chemical or other change could have produced a threaded bolt as an integral part of the human anatomy.

TOWARD evening, he returned to the flying field and examined his machine. One wing showed the effect of weathering but it was an all-metal Roamer of the latest model and had withstood the ordeal well. The gasoline gauge showed an empty tank but it was no great task to get more from the big underground tanks at the field. Oil lines and radiators seemed all tight and when he swung the propeller the motor purred for him like a cat.

With a kind of secret satisfaction gurgling within him Herbert Sherman taxied across the field, put the machine into a climb and went forth to have a look at New York.

He thought he could see smoke over central Manhattan and swung the Roamer in that direction. The disturbance seemed to be located at the old Metropolitan Opera House

which, as he approached it, seemed to have been burning but had now sunk to a pile of glowing embers. The fire argued human presence of some kind. He took more height and looked down. Times Square held a good many diminutive dots but they didn't seem to be moving.

He swung over to examine the downtown district. All quiet. When he returned he saw a car dodging across Forty-second Street and realizing that he could find human companionship whenever he needed it, which he did not at present, he returned to the flying field.

At this point it occurred to him to be hungry. Reasoning the matter out in the light of his mechanical experience he drank a pint or more of lubricating oil and searched for a place to spend the night.

Not being sleepy he raided a drug store where books were sold, took as much of its stock as he could use. Arranging one of the flares at the field in a position convenient for reading he settled down for the night. In the course of it he twice tried smoking and found that his new makeup had ruined his taste for tobacco.

With the first streaks of day he was afoot again, going over the Roamer with a fine-toothed comb since he had no mechanic to do it for him, tuning her up for a long flight. He had no definite purpose in mind beyond a look around the country. Was it all like this or only New York?

Newark attracted his attention first. He noted there were ships at most of the piers in the river, that none of them bore signs of life. Neither had the streets on the Jersey side of the river any occupants other than those who were obviously still forever.

As he flew along toward the Newark airport a shadow fell athwart the wing and he looked up.

A big bird was soaring past, flying above and fully as fast as the plane. In his quick glance Sherman

caught something unfamiliar about its flight and leaned over to snap on the mechanical pilot while he had another look.

The bird, if bird it was, was certainly a queer specimen. It seemed to have two sets of wings and was using them as though it were an airplane, the fore pair outstretched and rigid, the hind wings vibrating rapidly. As he gazed at the bird it drew ahead of the plane, gave a few quick flips to its fore-wings and banked around to pick him up again.

It was coming closer and regarding him with an uncommonly intelligent and by no means friendly eye. Sherman swung his arm at it and gave a shout—to which the bird paid not the slightest attention. Newark was running away under him.

Reluctantly, he resumed control of the stick, put the plane into a glide and made for the airport. It occurred to him that this would be an awkward customer if it chose to attack him and he meditated on the possibility of finding a gun in Newark.

The field was bumpy but he taxied to a stop and climbed out to look over the silent hangars before one of which a little sports plane stood dejectedly, a piece of torn wing flapping in the breeze. As the Roamer came to rest he looked back at the bird. It was soaring away up in a close spiral, emitting a series of screams. Sherman determined to find a gun without delay.

Newark was like Jackson Heights—same stony immobility of inhabitants, same sense of life stopped at full tide in the streets. He prowled around till he found a hardware store and possessed himself of a fine .50-50 express rifle with an adequate supply of cartridges as well as a revolver, added to it a collection of small tools, stopped in at a library to get a supply of reading matter more to his taste than that the drug store could provide.

As he took off again two specks in the sky far to the north repre-

sented, he decided, additional specimens of the peculiar bird life that had spread abroad since the change. How long it had been he had no idea.

He decided on a flight northwest, following the line of the mail route. There was a chance that the whole country might not be engulfed by this metal plague, though the near absence of life in New York was not encouraging.

Port Jervis was his first control point but Sherman was fond enough of the green wooded slopes of the Catskills to run a little north of his course, bumpy though the air was over the mountains. He set the automatic pilot and leaned back in his seat to enjoy the view.

Just north of Central Valley something seemed different about the hillside. A new scar had appeared along its edge. He turned to examine it, swooping as he did so and in a quick glance from the fast-moving airplane saw that the great forest trees, maples and oaks, were all down, twisted, barren, leafless, along a line that ran right up the valley and across the hill as though they had been harrowed by some gigantic storm. The line was singularly definite. There were no half-broken trees.

He swooped for another look and at that moment was conscious of the beat of swift wings and above the roar of the motor heard the scream of one of the strange four-winged birds.

Half-unconsciously he put the Roamer into a steep climb and kicked the rudder to one side, just as the bird flew past him on whistling pinions, like an eagle that has missed its plunge, and recovered to rise again in pursuit. Sherman flattened out, and without paying any attention to direction, snapped in the automatic pilot and reached for his gun.

As he bent there came a sharp crack from above and behind him and another scream right overhead. He looked over his shoulder to see

a second bird clutching at the edge of the cockpit with one giant claw, its forewings fluttering rapidly in the effort to keep its balance in the propeller's slipstream. With the other claw it grabbed and grabbed for him.

SHERMAN flattened himself against the bottom of the cockpit and fired up and back, once—twice—three times. The plane rocked. The bird let go with a shrill scream, a spurt of blood showing on its chest feathers and as Sherman straightened up he saw it whirling down, wings beating wildly, uselessly, the red spot spreading.

But he had no time for more than a glance. The other bird was whirling up to the attack beneath him, yelling as though it were shouting a battle-cry. The pistol, half-empty, might too easily miss.

Sherman sought the rifle and at that moment felt the impact of a swift blow on the floor of the plane. The bird understood that he had weapons and was attacking him from beneath to avoid them! The thought that it was intelligent flashed through his mind with a shock of surprise as he leaned over the side, trying to get a shot at his enemy.

Beneath the plane he caught a momentary glimpse of the ground again, torn and tortured, and in the center of the devastation the ruins of a farmhouse, its roof canting crazily over a pulled-out wall.

The bird dodged back and forth, picking now and then at the bottom of the plane with its armored beak. He leaned further trying to get in a shot and drew a chorus of yells from the bird but no more definite result. *Bang!* Again. Miss. Out of the tail of his eye he saw the line of green leap into being again. Flap, flap went the wings beneath him.

Suddenly from below and behind him there rose a deep humming roar, low pitched and musical. Abruptly the screaming of the bird ceased.

It dropped suddenly away, its forewings folded, the rear wings spread glider-like as it floated to the ground.

He turned to look in the direction of the sound and as he turned a great glare of light sprang forth from somewhere behind, striking him full in the eyes with blinding force. At the same moment something pushed the Roamer forward and down, down, down.

He could feel the plane give beneath him but in the blind haze of light his fumbling fingers could not find the stick. As he felt a wave of burning heat struck his back and the sound of a mighty torrent reached his ears. There was a crash and everything went out in a confusion of light, heat and sound.

* * * * *

When he recovered consciousness the first thing he saw was a blue dome, stretched so far above his head that it might have been the sky save for the fact that the light it gave had neither glare nor shadow. He puzzled idly over this for a moment, then tried to turn his head. It would not move.

"That's queer," thought Herbert Sherman and attempted to lift an arm. The hands responded readily enough but the arms were immovable. With an effort he tried to lift his body and discovered that he was held tightly by some force he could not feel.

Herbert Sherman was a patient man but not a meek one. He opened his mouth and yelled—a good loud yell with a hard swearword at the end of it. Then he stood still for a moment, listening. There was a sound that might be interpreted as the patter of feet somewhere but no one came near him. So he yelled again, louder if possible.

This time results accrued with a rapidity that was almost startling. A vivid bluish light struck him in the face, making him blink, then was turned off and he heard a clash of gears and a hum that might be that of a motor.

A moment later he felt himself lifted, whirled around, dropped with a plunk and the blue dome overhead began to flow past at rapidly mounting speed to be blotted out in a grey dimness. He perceived he was being carried down some kind of a passage whose ceiling consisted of dark stone. A motor whirred rapidly.

The stone ceiling vanished; another blue dome, less lofty, took its place. The object on which he was being carried stopped with a mechanical click and he was lifted, whirled around again and deposited on some surface. Out of the corner of his eye he caught a glimpse of something round, of a shining black coloring, with pinkish highlights, like the head of some enormous beast. He wiggled his fingers in angry and futile effort.

He was flopped over on his face and found himself looking straight down at a grey mass which from its feel on nose and chin, appeared to be rubber.

He yelled again with rage and vexation and in reply received a tap over the head with what felt like a rubber hose. He felt extraordinarily helpless. And as the realization came that he *was* helpless, without any control of what was going on, he relaxed. After all, there was no use. Some kind of examination was in progress. There was the sound of soft-treading feet behind him.

AFTER a slight pause he was bathed in a red light of such intensity as to press upon him with physical solidity. He closed his eyes against it and as he did so felt a terrible pain in the region of his spine. Was it death?

He gripped metallic teeth together firmly in an effort to fight the pain without yelling—(perhaps this was deliberate torture and he would not give them the satisfaction)—and dully, amid the throbbing pain, Sherman heard a clatter of metal instruments. Then the pain ceased, the light went off and something

was clamped violently about his head.

A minute more and he had been flipped over on his back. With the same whirring of motors that had attended his arrival he was carried back through the passage and into the hall of the blue dome. He was still held firmly but now there was a difference. He could wiggle in his bonds.

With a clicking of machinery he was tilted up on the plane that held him. A hole yawned before his feet and he slid rapidly down a smooth incline, through a belt of darkness to drop in a heap on something soft. The trapdoor clicked with finality behind him.

HE FOUND himself, unbound, on a floor of rubberlike texture and on rising to look around, perceived that he was in a cell with no visible exit, whose walls were formed by a heavy criss-cross grating of some red metal.

It was a little more than ten feet square. In the center a seat with curving outlines rose from the floor, apparently made of the same rubbery material as the floor itself.

A metallic track ended just in front of the seat.

Following back his eyes caught the outlines of a kind of lectern, now pushed against a wall of the cell, with spaces below the reading flat and handles attached. Against the back wall of the cell stood a similar device, but larger and without any metal track. Beside it two handles dangled from the wall on cords of flexible wire.

This was all his brief glance told him about the confines of his new home. Looking beyond it he saw that he was in one of a row of similar cells, stretching back in both directions. In front of the row of cells was a corridor along which ran a brightly-burnished metal track and this was lined by another row of cells on the farther side.

The cell at Sherman's right was

empty but he observed that the one on the left had a tenant—a metal man, like himself in all respects and yet—somehow unlike. He stepped over to the grating that separated them.

"What is this place, anyway?" he inquired.

His neighbor, who had been sitting in the rubber chair, turned toward him a round and foolish face with a long naked upper lip and burst into a flood of conversation of which Sherman could not understand one word.

He held up his hand. "Wait a minute, partner," he said. "Go slow. I don't get you."

The expression on the fellow's face changed to one of wonderment. He made another effort at conversation, accompanying it with gestures. "Wait," said the aviator. "*Sprechen Sie Deutsch? Français? Habla Espanol?* No? Dammit what does the guy talk. I don't know any Italian—Spaghetti, macaroni, lasagna!"

No use. The metal face remained blankly uninspired. Well, there is one thing men of all races have in common. Sherman went through the motions of drawing from his pocket a phantom cigarette, applying to it an imaginary match and blowing the smoke in the air.

It is impossible for a man whose forehead is composed of a series of lateral metal bands to frown. If it were the other would have done so. Then comprehension appeared to dawn on him. He stepped across to his lectern and *with his toes* pulled the bottom slide open, extracted from it a round rubber container and, reaching through the bars, handed it to Sherman.

The aviator understood the difference that had puzzled him in the beginning.

Instead of the graceful back-sweeping curve that sets a man's head vertical with his body, this individual had the round-curve neck and low-hung head of the ape.

CHAPTER XII

THE POISONED PARADISE

TO HIDE his surprise Sherman bent his head to examine the object the ape-man had handed him. It was about the size of a baseball with little holes in it. He inserted a finger in one of the holes and a stream of oil squirted out and struck him in the eye.

His neighbor gave a cry of annoyance at his clumsiness and reached through the bars to have the ball returned. As he received it there came sudden flickerings of lights along the hall from somewhere high up, like the trails of blue and green rockets. The mechanical ape-man dropped the oil-ball and dashed to the front of his cell.

Sherman saw a vehicle proceeding down the line of cells—a kind of truck that rode on the track of the corridor and was so wide it just missed the gratings. It had a long series of doors in its sides and as it came opposite an occupied cell it stopped. Something happened. The bars of the cell opened inward and the inmate emerged to step into a compartment which at once closed behind him.

When it stopped at the ape-man's cage Sherman watched the procedure closely. A little arm appeared from beneath the door of the compartment and did something to one of the lower bars of the cell. But the truck passed Sherman by, moving silently along to other cells beyond him.

He turned to examine the room more closely and as he did so saw that a second truck was following the first. This one, with an exactly reversed procedure, was returning robots to their cells. It dropped an inmate in the cell at his right—(another ape-man)—and trundled along down the line. But as it reached the

end of the corridor it turned back and, running along till it came to his cell, stopped, flung out the metal arm and opened the bars in invitation.

Sherman had no thought of disobeying. As long as he was in this queerest of all possible worlds, he thought, he might as well keep to the rules. But he was curious about the joint of the cage and how it unlocked and he paused a moment to examine it.

The machine before him buzzed impatiently. He lingered. There came a sudden clang of metal from inside the car, a vivid beam of blue light called his attention, and looking up, he saw the word *EXIT* printed in letters of fire at the top of the compartment.

With a smile he stepped in. A soft light was turned on and he found himself in a tiny cubbyhole with just room for the single seat it provided and on which he seated himself. There was no window.

The machine carried him along smoothly for perhaps five minutes, stopped and the door opened before him. He issued into another blue-domed hall—a small one this time, containing a rubber seat like that in his cell but with an extended arm on which rested a complex apparatus of some kind. The seat faced a white screen like those in movie theaters.

He seated himself and at once a series of words appeared in dark green on the screen. *Dominance was not complete*, it read. *Communication?* Then below, in smaller type, as though it were the body of a newspaper column. *Lassans service man. Flier writing information through communication excellent. Dinner, bed, book. No smoking. Yours very truly.*

As he gazed in astonishment at this cryptic collection of words it was erased and its place was taken by a picture which he recognized as a likeness of himself in his present metallic state. A talking picture, which made a few remarks in the same incomprehensible gibberish

the ape-man had used, then sat down in a chair like that in which he now rested and proceeded to write on the widespread arm with a stylus which was attached to it. The screen went blank. Evidently he was supposed to communicate something by writing.

The stylus was a metal pencil and the material of the arm, though not apparently metallic, must be, he argued from the fact that it seemed to have electric connections attached. As he examined it, the blue lights flickered at him impatiently. *The white knight*, he wrote in a fit of impish perversity, *is climbing up the poker*. Instantly the words flashed on the screen.

Pause. *IS CLIMBING* declared the screen, in capitals. Then below it appeared a fairly creditable picture of a knight in armor followed by a not very creditable picture of a poker. Sherman began to comprehend. Whoever it was behind this business had managed a correspondence course of a sort in English but had failed to learn the verbs and he was being asked to explain.

For answer he produced a crude drawing of a monkey climbing a stick and demonstrated the action by getting up and going through the motions of climbing. Immediately the screen flashed a picture of the knight in armor ascending the poker by the same means.

But it had hardly appeared before it was wiped out to be replaced by a flickering of blue lights and an angry buzz. His interlocutor had seen the absurdity of the sentence and was demanding a more serious approach to the problem. For answer Sherman wrote, *Where am I and who are you?*

A LONGER pause. *Dominance not complete*, said the screen. Then came the picture of the first page of a child's ABC book with, *A was an Archer who shot at a frog*, below the usual childish picture. Then came the word *think*. With the best will in the world Sherman was puzzled to

illustrate this idea but by tapping his forehead and drawing a crude diagram of the brain as he remembered it from books, he managed to give some satisfaction.

The process went on for three or four hours as nearly as Sherman could judge the time, ending with a flash of the word *Exit* in red from the screen and a dimming of the blue-dome light. He turned toward the door and found the car that had brought him, ready for the return journey.

As it rumbled back to his cell he ruminated on the fact that none of the men, or whatever they were behind this place had yet made themselves visible. It was incredible that beings of the type of the metallic ape-man who occupied the next cell to his should have intelligence enough to operate such obviously highly-developed machinery.

But what next? He pondered the question as the car deposited him in his cell. Obviously he was being kept a prisoner. He didn't like it, however comfortable the imprisonment.

The first thing that suggested itself was a closer inspection of his cell. The lectern yielded an oil-ball like that the ape-man had given him and another similar device containing grease. There were various tools of uncertain purpose and in the last drawer he examined a complete duplicate set of wrist and finger joints.

The larger cupboard had deep drawers, mostly empty, though one of them contained a number of books, apparently selected at random from a good-sized library—*Mystery of Oldmixon Hall*, *Report of the Smithsonian Institution, 1903*, *The Poems of Jerusha G. White*—a depressing collection.

This seemed to exhaust the possibilities of the cell and Sherman looked about for further amusement. His ape neighbor had pressed himself close to the bars on that side, indicating his interest in what Sherman was doing by chuckling bubbles

of amusement.

Further down the line one of the ape-men was holding the pair of handles that projected from the wall beside his cabinet. Sherman grasped his also. There was a pleasant little electric shock and in the center of the wall before him a slide moved back to disclose a circle of melting light that changed color and form in pleasing variations.

The sensation was enormously invigorating and it struck the aviator with surprise that this must be the way these creatures—"These creatures!" he thought, "I'm one of them"—the way these creatures acquired nourishment. The thought gave him an inspiration.

"Hey!" he called in a voice loud enough to carry throughout the room. "Is there anyone here that can understand what I'm saying?"

There was a clank of metal as faces turned in his direction all down the line of cages.

"Yes, I guess so," called a voice from about thirty feet away. "What do you want to say?"

Sherman felt an overwhelming sense of relief. He would not have believed it possible to be so delighted with a human voice. "Who's got us here and why are they keeping us here?" he shouted back.

A moment's silence. Then—"Near's I can make out it's a passel of elephants and they've got us here to work."

"What?" Sherman shouted back, not sure he had heard aright.

"Work!" came the answer. "Make you punch the holes on these goddam light machines. It wears your fingers off and you have to screw new ones in at night."

"No, I mean about the elephants."

"That's what I said—elephants. They wear pants and they're right smart too."

Insoluble mystery. "Who are you?" called the aviator.

"Mellen, Harve Mellen. I had a farm right here where they set up this opry house of theirs."

Along the edge of Sherman's cell a blue light began to blink. He had an uncomfortable sensation of being watched. "Is there any way of getting out of here?" he shouted to his unseen auditor.

"Sssh," answered the other. "Them blue lights mean they want you to shut up. You'll get a paste in the eye with the yaller lights if you don't."

So that was it! They were being held as the servants—slaves—of some unseen and powerful and very watchful intelligence. As for "elephants with pants" they might resemble that and they might not. It was entirely possible that the phrase represented merely a picturesque bit of metaphor on the part of the farmer.

It must be an actual invasion of the earth, as in H. G. Wells' *War of the Worlds*, a book he had read in his youth. The comet could have been no comet then and—yet the whole thing—this transformation of himself into a metal machine, the crash of the Roamer and his subsequent bath in the painful red light. It was all too fantastic. Then he remembered that one does not feel pain in dreams.

They were giving him books, food—if this electrical thing was indeed the food his new body required—little to do. Keeping him a prisoner in a kind of poisoned paradise.

At all events the locks on these bars should offer no great difficulty to a competent mechanic. He set himself to a further examination of the tools in the lectern.

The main difficulty in the way of any plan of escape lay in his complete lack of both information and the means of obtaining it. The mechanical ape-men were hopeless. They merely babbled incoherent syllables and seemed incapable of fixing their attention on any object for as long as five minutes. As for the New York farmer his cage was so far away that the conversation could be carried on only in shouts and

every shout brought a warning flicker of blue lights.

ON THE second day, out of curiosity, Sherman kept up the conversation after the blue lights went on. A vivid stream of yellow light promptly issued from one corner of the cage, striking him full in the eyes. Apparently it was accompanied by some kind of a force-ray for he found himself stretched flat on the floor. After that he did not repeat the experiment.

The next question was that of the lock on the cell-bars. The closest inspection he could give did not reveal the joints—they were extraordinarily well fitted. On the other hand he remembered that the arm of the truck had reached under one of the lower bars. Lying flat on his back Sherman pulled himself along from bar to bar, inspecting each in turn.

About midway along the front of the cell, he perceived a tiny orifice in the base of one bar—a mere pin-hole. Marveling at the delicacy of the adjustment which could use so tiny a hole as a lock he sat down to consider the problem. He was completely naked and had nothing but the objects that had been placed in the cell by his jailers.

Among the assortment of tools in his bureau was a curve-bladed knife with the handle set parallel to the blade as though it were meant for chopping. Forming the wall of the same drawer was a strip of a material like emery cloth. After some experimenting he found a finger-hole which, when squeezed, caused this emery-cloth to revolve, giving a satisfactory abrasive.

Thus armed with a tool and a means of keeping an edge on it, he took one of the metal bands from the drawer that contained the duplicate set of hands and set to work.

Producing a needle that would penetrate the hole in the bars took all of three days' work though he had no means of marking the time accurately. The metal band was

pliable, light and, for all its pliability and lightness, incredibly hard. His tool would barely scratch it and required constant sharpenings. Moreover, he had little time to himself; his unseen scholar required constant lessons in English. But at last the task was done.

Choosing a moment when one of the cages at his side was empty and the occupant of the other was busy over some silly sport of his own—tossing a ball from one hand to another—Sherman lay down on the floor, found the opening and drove his needle home. Nothing happened.

He surveyed the result with disappointment. It was disheartening after so much labor to attain no result at all. But it occurred to him that perhaps he had not learned the whole secret of the arm and the next time the car came down the corridor for him he was lying on the floor, carefully watching the opening.

As he had originally surmised a needle-like point was driven home. But he noted that on either side of the point the arm gripped the bar tightly, pressing it upward.

This presented another difficulty. He had only two hands. If one of them worked the needle he could grip the bar in only one place. But he remembered, fortunately, that his toes had showed a remarkable power of prehension since the change that had made him into a machine.

He finally succeeded in bracing himself in a curiously twisted attitude and driving the needle home under the proper auspices. To his delight it worked—when the needle went in the bars opened in the proper place, swinging back into position automatically as the pressure was withdrawn.

With a new sense of freedom Sherman turned to the next step. This was obviously to find out more of the place in which he was confined and of the possibilities of escape. It seemed difficult.

But even on this point he was not

to be long without enlightenment. His unseen pupil in English was making most amazing progress. The white screen which was their means of communication now bore complicated messages about such subjects as what constituted philosophy.

Sherman felt himself in contact with an exceptionally keen and active mind, though one to which the simplest earthly ideas were unfamiliar. There were queer misapprehensions—for instance, no process of explanation he could give seemed to make the unseen scholar understand the use and value of money and they labored for a whole day over the words *president* and *political*.

In technical matters it was otherwise. Sherman had barely to express an idea before the screen made it evident that the auditor had grasped its whole purport. When he wrote the word *atom* for instance and tried to give a faint picture of the current theory of the atom it was hardly a second before the screen flashed up with a series of diagrams and mathematical formulae, picturing and explaining atoms of different types.

AFTER four weeks or more—(as nearly as Sherman could estimate it in that nightless sleepless place where time was an expression rather than a reality)—the car that came for him one day discharged him into a room entirely different from the schoolroom. Like the schoolroom it was small and some twenty feet across. Against the wall opposite the door stood a huge machine, the connections of which seemed to go back through the wall. Its vast complex of pulleys, valves and rods conveyed no hint of its purpose even to his mechanically-trained mind.

Across the front of it was a long, black board, four feet or more across and somewhat like the instrument board of an airplane in general character. At the top of this board was

a band of ground glass set off in divisions. Beneath this band a series of holes, each just large enough to admit a finger, each marked off by a character of some kind in no language Sherman had ever seen.

To complete the picture one of the mechanical ape-men stood before the board as though expecting him. On the ape-man's head was a tight-fitting helmet, connecting with some part of the machine by a flexible tube. As Sherman entered the room the ape-man motioned him over to the board, pointed to the holes and in thick but intelligible English said, "Watch!"

A flash of purple light appeared behind the first of the ground-glass screens. The ape-man promptly thrust his finger into the first of the holes. The light went out, and the ape-man turned to Sherman. "Do," he said. The light flashed on again and Sherman, not unwilling to learn the purpose of the maneuver, did as his instructor had done.

He was rewarded by a tearing pain in the fingertip and withdrew the member at once. Right at the end it had become slightly grey. The ape-man smiled. Behind the second ground-glass a red light now appeared and the ape-man thrust his finger into another of the apertures, indicating that Sherman should imitate him.

This time the aviator was more cautious but as he delayed the light winked angrily. Again he received the jerk of pain in the fingertip and withdrew it to find that the grey spot had spread.

When the third light flashed on he refused to copy the motion of his instructor. The light blinked at him insistently. He placed both hands behind his back and stepped away from the machine. The ape-man, looking at him with something like panic, beckoned him forward again. Sherman shook his head. The ape-man threw back his head and emitted a long, piercing howl.

Almost immediately the door slid

back and the car appeared. As Sherman stepped to its threshold, instead of admitting him, it thrust forth a gigantic folding claw which gripped him firmly around the waist and held him while a shaft of the painful yellow light was thrown into his eyes—then tossed him back on the floor and slammed shut vengefully.

Dazed by the light and the fall Herbert Sherman rolled on the floor, thoughts of retaliation flashing through his head. But he was no fool, and before he had even picked himself up, he realized that his present case was hopeless. Gritting his teeth he set himself to follow the ape-man's instructions, looking him over carefully to recognize him again in case—

The course of instruction was not particularly difficult to memorize. It seemed that for each color of light behind the ground-glass panels one must thrust a finger into a different one of the holes below—hold it there in spite of the pain till the colored light went out—then remove it. The process was very hard on the fingers, made of metal though they were. What was it the farmer had shouted down the hall—"Wears your fingers out?" Well, it did that, all right.

After an hour or two of it, when he had learned to perform the various operations with mechanical precision and the tip of his index finger had already begun to scale off, the ape-man smiled at him, waved approval and reaching down beneath the black board, pulled out a drawer from which he extracted a fingertip, made of the same metal as those he already bore, and proceeded to show Sherman how to attach it.

As a mechanic he watched the process with some interest. The "bone" of the finger, with its joint, screwed cunningly into the bone of the next joint below, the lower end of the screw being curiously cut away and having a tiny point of wire set in it. The muscular bands had loose ends that merely tucked in but

so well were they fashioned, that once in position, it was impossible to pull them out until the fingertip had been unscrewed.

The instruction process over, he was returned to his cell, wondering what was to happen next. The poisoned paradise was becoming less of a paradise. He speculated on the possibility of wrecking the car that bore him from place to place but finally decided that it could not be done without some heavy tool and was hardly worth the trouble in any case until he was more certain of getting away afterward.

CHAPTER XIII

THE LASSAN

WHEN the car next called for him it took a much longer course—one steadily downward and around a good many curves as he could judge from the way in which it swayed and gained and lost speed. It was fully a twenty-minute ride and when he stepped out it was not into a room of any kind but in what appeared to be a tunnel cut in the living rock, at least six feet wide and fully twice as high. The rock on all sides had been beautifully smoothed by some unknown hand, except underfoot, where it had been left rough enough to give a grip to the feet.

At his side were two of the ape-men, who had been released from the car at the same time. The tunnel led them straight ahead for a distance, then dipped and turned to the right. As he rounded the corner he could see that it ended below and before him in a room where machinery whirled.

The ape-men went straight on, looking neither to the right nor the left. As they reached the door that gave into the machine-room they encountered another ape-man, wearing the same kind of helmet with its

attached tube that Sherman's instructor had worn.

The ape-men who came with him stopped. The helmeted one looked at them stupidly for a moment and then, as though obeying some unspoken command, took him by the arm and led him across the room to the front of a machine and there thrust one of the ubiquitous helmets on his head.

The machine, as nearly as Sherman could make out, was a duplicate of that on which he had injured his fingers. As the helmet was buckled on the ape-man who stood before it he immediately began to watch the ground-glass panels and put his fingers in the holes below.

The process was repeated with the second ape-man, and then the sentinel returned to Sherman. Taking him by the arm the mechanical beast led him past the row of machines—(there seemed to be only four in the room)—and to a door at one side, giving him a gentle push. It was the opening of another tunnel, down which Sherman walked for some forty or fifty yards before encountering a second door and a second helmeted ape-man sentry.

This one did exactly as the first had done—stared at him for a moment, then took him by the arm and led him across the room to a machine, where it left him. Sherman perceived that he was supposed to care for it and with a sigh bent to his task.

It was some moments before the rapid flashing of lights gave him a respite. Then he had an opportunity to look about him and observed that, as in the other room, there were four machines. Two of them were untenanted but at the one next to his there was someone working. When he glanced again he was sure it was a mechanized human like himself—and a girl!

"What is this place?" he asked, "and who are you?"

The other gave a covert glance over his shoulder at the sentry by

the door.

"Sssh!" she said out of the corner of her mouth. "Not so loud. I'm Marta Lami—and I think this place is hell!"

After a time they contrived a sort of conversation, a word at a time, with covert glances at the ape-man sentry. He looked at them suspiciously once or twice but as he made no attempt to interfere they gained confidence.

"Who is keeping us here?" asked Sherman.

"Don't know," she replied. "Think it's the elephants."

"What elephants?" he asked a word at a time. "I haven't seen any."

"You will. They come around and inspect what you're doing. Are you new here?"

"New at these machines. They had me teaching them to write English. This is my first day in here."

"This is my eightieth work-period. We lost track of the days."

"So did I. Where are we? Are there any other humans with you?"

"One in the cage across the corridor from me. Walter Stevens, the Wall Street man."

"Have they got him on this job, too?"

"Yes."

SHERMAN could not avoid a snicker. Back in the days before the comet he had had Stevens as a passenger once. A more difficult customer to satisfy, a more cocksure-of-his-own-importance man he had never seen. The thought of him burning his fingertips up in one of these machines gave him some amusement. But his next question was practical.

"Do you know what these machines are for?"

"Haven't the least idea. Stevens said they were for digging something. They had the helmets on him twice."

"What helmets?"

"Like dopey at the door wears. The dopeys all have to wear them."

"Why?"

"Haven't got any brains, I guess. I had one on once when they were teaching me to do this. They tell you what to think."

"What do you mean?"

"You put the helmet on and it's like you're hypnotized. You can't think anything but what they want you to think."

Sherman shuddered slightly. So that was how the mechanical apemen were controlled so perfectly!

"How did they get you?" asked the girl who had described herself as Marta Lami.

"In an airplane. I'm an aviator. They shot me down somewhere and when I came to put me in one of those cages. How did you get here?"

"The birds, I was at West Point with Stevens and that old fool Vanderschoof. They started shooting at the birds and the birds just picked us up and flew away with us."

"Where were you after you came to? I mean after the comet."

"New York. Century Roof. I was dancing there before."

"You aren't Marta Lami, the dancer?"

"Sure. Who do you think?"

He turned and regarded her deliberately, careless of the aroused attention of the sentry. So this was the famous dancer who had blazed across two continents and three divorce suits—who had been proclaimed the most beautiful woman in the world in starring neon lights before an applauding Broadway—for whose performances speculators held tickets at prizefight premiums! How little she resembled it now, a parody of the human form, working her fingers off as the slave of an alien and conquering race.

She asked the next question. "Where have they got you?"

"I don't know. In a cage somewhere. The only people around there are like these mugs." He nodded toward the ape-man.

"I wonder how long they'll keep us at this."

"I wish I could tell you. How's chances of making a break?"

"Rotten. There was a guy at the next machine tried three or four work-periods ago. He socked the dopey at the door."

"What happened?"

"They sent a machine down for him and gave him the yellow lights all over. It was rugged—you should have heard him scream."

"How far down are we anyway?"

"You got me, boy friend. Sssh! Watch the dopey."

Sherman glanced over his shoulder to see the ape-man moving aside from the door and bent back to his work. Evidently something important was imminent, judging from the actions of the sentry and the energetic attention the ex-dancer was giving to her machine. He was not deceived.

Down the passage came something moving—something flesh-like and smooth of a pale greyblue dead-fish color, like a dangling serpent, then a round bulging head, finally the full form of an elephant—but such an elephant as mortal eye had never before seen.

It stood barely eight feet high and its legs were both longer and infinitely more slender and graceful than the legs of any earthly elephant. The ears were smaller, not loose flaps of skin but possessed of definite form and pressed close to the head.

The skull was enormous, bulging at the forehead and wrinkled in the middle over the large intelligent eyes in an expression permanently cross and dissatisfied. As for the trunk it reached nearly to the floor, longer and thinner in proportion than the trunk of an ordinary elephant, at its tip divided into four fingerlike projections set around the circle of the nostril.

Oddest of all the elephant wore clothes—or at least an outer garment, a kind of long cloak which appeared to be attached underneath its body and which covered every portion from neck to ankles. The

feet also were covered. A kind of parka hung back from the head on that portion of the cloak which rested on the creature's back. But what chiefly aroused Sherman's sense of strangeness and loathing was that the naked skin, wherever exposed, was of that same poisonous dead-fish blue.

For a moment the thing stood in the doorway, regarding them, swinging its long trunk around restlessly as though it could tell something about them by its sense of smell. Then it advanced a step or two into the room and, placing its trunk close to Sherman's body, began to run over it, sniffing, a few inches away. He felt that he wanted to shriek, to turn and strike the thing, to run, but a warning glance from the dancer kept him motionless.

Apparently satisfied with the result of its examination the elephant turned to go, stopping as it did so to unhook some projection on the ape-man's helmet and apply it to its ear. After listening for a moment it put the end of the trunk to this projection, snorted into it and went away with soundless steps.

FOR several minutes the two worked on in silence after this.

Then, "Well, now you've seen him," said the dancer, "That was our boss."

"That—thing?" asked Sherman, incredulously.

"I'll tell the cockeyed world. Say, those babies know more than Einstein ever heard of. Try to get fresh with one of them and see."

"What do they do?"

"Shoot you with one of the light-guns. They carry little ones around with them. They melt you down wherever they hit you and you have to go to the operating room to have things put back and it hurts like blazes."

"I must have been there after they brought me down in my plane. They did something to my back."

"Then you know, chum. After that they put the helmet on you and you have to tell 'em what you're thinking about. You can beat that game, though, if you're careful. All I'd give 'em was how good a couple of Scotch highballs would taste and it made monkeys of 'em."

It was all very strange and not a little bewildering. Intelligent elephants that controlled forces beyond the powers of men—who could place a helmet on your head and read your thoughts—who could repair the new mechanized human form after it had apparently suffered irreparable damage—who treated men and women as lower animals. Their arrival must have been that of the comet.

Herbert Sherman had read deeply enough, though not widely. He remembered some Englishman—Colvin, Kevin, Kelvin, that was it—who had a theory that life had drifted to the earth from somewhere out in the void of space and time.

Had these too drifted in in the same way the ancestors of man had come, to set a period to the day of man's dominance over creation? A strange enough creation it was now with its mechanical men and its animals turned to metal statues. He wondered what Noah would say and giggled at the thought.

"What's the joke, boy friend?"

"Oh, nothing. I had an idea."

Their plight at the hands of these master-animals was bad but it might be worse. At least he had a certain amount of freedom, he was stronger than he had ever before been in his life and felt quite as intelligent. It would be strange if he could not accomplish something. He fell to planning out ways of escaping and failed to notice the pain in his fingers in the intensity of his thoughts.

Everything seemed to show that the operation of most of these machines was predominantly electrical. It would be strange if the car that carried them to and fro was not—yes and, by Jove, the helmets the ape-men wore. If he could short-cir-

cuit the works or even a part of them . . .

Apparently his new body was a good conductor and impervious to the injurious effects of the electric current. Short-circuit something, that was the idea, create confusion—and trust to escaping in the midst of it? Perhaps—but at all events a good deal could be learned about these elephant-men and their methods by watching them in such an emergency. Their machinery was so efficient that a child could operate it. It was in a pinch that their real intelligence would show.

It struck him that it would do little good to escape unless he did learn something about these elephant-people, their mysterious light-guns, the vast city that they seemed to have hollowed out of the heart of the solid Catskill rock, their chemistry and metallurgy and methods of attack and defense.

Otherwise escape would be a jumping from the frying-pan into the fire. There would be nothing for it but a desperate, harried existence, the existence of one of the lower animals faced by the insupportable competition of man. Information! That was the first need. He must bend all his energies to the task of obtaining it.

"By the way, what do these eggs call themselves?" he asked.

"Lassans," said the dancer.

A light flickered along the corridor. The ape-man at the door came forward, touched him on the arm and led him to the passage, where he caught the car back to his cage.

CHAPTER XIV

IN THE PASSAGES

THE first thing to be done, Sherman decided, was to short-circuit the mind-reading helmet of the guard at the door if it were possible.

He was not certain that the thing was electrical and ignorant of how the current was conveyed if it were.

He realized that he was dealing with the products of an utterly alien form of mentality, one that might not produce its results in the same way that an earthman would at all. But something had to be dared and this seemed to offer the best opportunity.

If the thing were electrical the current must come through the tube to the top of the head. On his second work-period he observed this tube with care. It ran through an aperture in the stone roof and was apparently provided with some spring device, for a considerable length of it reeled out when the ape-man wished to walk across the room and was absorbed as he returned.

The tube seemed to be made of the rubberlike material that composed the floor of his cage. The simplest plan, of course, would be to bring his chopping-knife with him and, when the ape-man paused before the wall, swing it up in a sweep, severing the tube.

But this, he felt, was not to be recommended. It would not necessarily short-circuit the current and the damage would be too readily laid at his door. The desideratum was some damage that, apparently accidental, would yet produce a good deal of uproar.

He talked it over with Marti Lami.

"I think you're bugs," she said frankly, "but anything for excitement. What do you want me to do about it?"

"Well, here's what I figured out," Sherman explained. "We both arrive about the same time. I'll bring my knife. When we come in you hang back a bit and while you're doing it I'll take a poke at that cable with the knife, not enough to cut it but enough to damage it.

"Then about halfway through the work period I'll turn around and say something to you. If I do it quick enough I think the monk will start

for me and if the cable doesn't go then, I'll miss my guess."

The next period proved unsuitable. The dancer's car arrived considerably before Sherman's and the plan was dropped for the time. But on the following occasion, as Sherman came down the passage, he noticed Marta Lami just ahead of him.

He hurried to catch up and she evidently understood, for she avoided the guard's outstretched hand and hung back a minute against the wall as Sherman came up behind. He made one quick motion. The cable sheared halfway through exposing two wires of bright metal.

As luck would have it it proved unnecessary to put the second part of the plan into operation. For just as Sherman was nerving himself to swing round and attract the ape-man's attention he heard the soft pad-pad of one of the approaching Lassans. The ape-man stepped back to clear the entrance as he had before and as he did so, there was a trickle of sparks, a blinding flash and the cable short-circuited.

The result was totally unexpected. From the great machine before Sherman there came an answering flash. The ground glass split across with a bang, there was a hissing sound and something blew up with a roar that rocked the underground chambers.

Sherman came to flat on his back and with pieces of rock and the debris of the machine lying across his legs. He looked around; Marta Lami lay some little distance across the room, half covered with fallen rock, one arm flung across her eyes as though to protect them. Above the solid granite looked as though a blasting charge had been fired in its midst.

Sherman pulled himself to a sitting posture and finding nothing damaged stood upright. The machine, badly shattered, lay in fragments of bent rods, broken pulleys and wrecked cylinders all about him.

In the place where it had stood was a long narrow opening, at the bottom of which something irregular shut off a bright point of light. A blast of heat exuded from the place and a steady deep-voiced roaring was audible. The ape-man guard was nowhere to be seen.

He bent to pick up the unconscious girl, wondering how one revived a mechanical woman especially without water. She solved the problem for him by opening her eyes and asking, "Who touched off the pineapple, chum?"

"I did. Come out of it and tell me what we do next. Anything busted?"

"Only my head." She patted the mass of stiff wire. "Boy, am I glad I wore my hair long before they made a robot of me!" And with an effort she stood up, looked down the pit where the machine had been and said, "Say, let's get out of here. That don't look good."

"All right," said Sherman. "Which way? Wait till I get my knife."

"Leave it," she said. "Those babies are nobody's saps. If they find it on you they'll know you shot the well. Come on, I think that thing is going to pop again."

The roaring had increased in both volume and intensity and the machine-room had become unbearably hot. They turned toward the door but just at the entrance to the passage a pile of debris had descended, making egress impossible. Behind them the roaring increased still more.

"Come on, chum," called the dancer, tearing at the rocks. "Get these out of the road unless you want to be stewed in your own juice."

Together they toiled over the blocks of granite, hurling them backward toward the wreck of the machine. One minute, two, three—the roaring behind them grew and spread—the heat became terrific.

"Ah!" cried Marta Lami at last. A tiny opening at the top of the heap was before them. Sherman

tugged at a rock—one more and they would be through. But it was too big, would not budge.

"No, this one," shouted his companion and together they dragged at it. It gave—a cascade of smaller stones rolled down the heap to the floor.

"You first," said Sherman and stood aside.

The dancer wriggled through and reached back a hand to pull him after. He dived, grunted, pushed—made it. As they turned to slide down the other side of the heap, he looked back. A little rivulet of something white, hot and liquid was creeping through the ruins of the machine and into the room.

UP THE passage, strewn with wreckage but with no more blockades, into the upper machine room. The machines here were also deserted and from one of them issued a minor variation on the roaring sound they had heard in their own room. The guard was not on duty.

They turned, sped up the next passage to the place where the cars ordinarily met them. The car-track was dark. By the illumination from the passage they could see the rail on which it ran, a foot or two down from the level of the passage and about a foot broad—a single shining ribbon of metal. Sherman looked in one direction, then the other. Nothing. The roaring behind them continued.

"Drive on, chum," said Marta Lami. "The boojums are going to get us if we wait."

"Stop, look, listen, watch out for the cars," he quoted as they leaped down and both laughed.

The roadbed was as smooth as glass, the rail set flush with it. Judging that the best route was the one taking them upward Sherman turned to the right and they began climbing, hand in metal hand.

The track was on a curve as well as an ascent. After a few steps they

were in complete darkness and could only feel their way along, running into the wall every few minutes. They climbed for what seemed hours.

The tunnel continued dark, without branches, simply winding on and on. Finally, so quickly that Sherman missed his step, they reached a level place, rounded one more curve, saw ahead of them a band of light across the track from some side-tunnel.

"Shall we try it?" he asked as they reached the opening.

"Might be another machineroom," she said, "but let's go. This track is terrible. If I wasn't made of iron I'd have bruises all over."

He vaulted over the sill, reached down and hauled her after him. From behind them came the roar, sunk to a vague purring by the distance. They were in another granite-lined passage, one that went straight ahead for a few yards, then branched sharply. The right hand fork seemed to lead downward—automatically they took the other turn.

A diffused radiance from somewhere high in the walls, as though the granite had been rendered transparent here and there, filled the whole place with shadowless light. For a time the passage ran level, then it climbed again with another fork to the right, which dipped away from their level and which they again avoided. Of any other living being there was thus far no sign.

The passage began climbing again, in a tight spiral this time.

"Good thing we're in training," remarked Marta Lami. "This is worse than the stairs in the Statue of Liberty."

"Oh, did you fall for climbing that too?" asked Sherman.

"Sure. Publicity stunt about a year ago. Dumb bunny of a publicity man. Photographed on the old lady's spikes. Never will again."

The spiral ended, a side passage branched off. The dancer stopped.

"Shh," she said. "Someone's coming. Duck in here." She seized

Sherman's hand and led him into the sidepassage, down which they ran for a few feet, then paused to look back.

Along the passage they had just vacated came a group of the ape-men, four or five of them, each carrying on his left arm a long, cylindrical shield like those one sees in pictures of Roman soldiers, in his right hand some instrument that looked like a fire extinguisher with a long, flexible nozzle.

Each of the group wore one of the helmets and behind them, wearing a similar headgear to which all the tubes were connected from the ape-men's helmets came one of the Lassans. The group hurried past without a sideward glance, the metal feet of the ape-men ringing oddly loud on the granite of the echoing passage. After a minute Sherman and the dancer crept cautiously forward. The procession had gone straight on down. Very likely a wrecking crew.

Sherman and Marta sprinted up the passage in the direction from which the ape-men and their guide had come. The passage no longer rose with the same steepness and as the ascent grew more gentle the tunnel widened, with frequent side-passages to the right and branches leading down to the track at the left.

Finally after a sharp turn it opened out into a big room, untenanted like all they had seen so far, filled with a complex maze of machinery, but machinery of a different character from that they had labored at. At the farther end of the room a door stood open. They dashed across it, plunged through—and found themselves in one of the enormous blue-domed halls, whose ceiling seemed to stretch miles above them.

IT MUST have been all of three hundred feet across, and there was no visible support for the ceiling. All about the place stood various objects and pieces of machinery and figures moved dimly among the ti-

tanic apparatus at the far end. But what most attracted their attention was the huge object that stood right before them.

It looked like a metal fish on an enormous scale. Fully fifty feet long and twenty feet high its immense proportions dwarfed everything about it. Its sides, of brilliantly polished metal, shone like a mirror. The tail came to a stubby point, from which projected a circle of four tubes.

Down the side was a rib which ended in a similar tube about halfway and at the nose-end of the mechanical fish was a ten-foot snout, not unlike an elephant's trunk in shape and apparently made of the same rubbery material which held the cables of the helmets.

Marta pulled Sherman down behind the thing and they peered around the edge, seeking a means of egress from the room. The nearest was twenty or thirty feet away. Watching their opportunity they chose a moment when they seemed least likely to attract attention and made a dive for it.

They found themselves in another passage, terminating in two doors.

"Which?" asked Sherman.

"Eeny-meeny" said Marta—"this one," and, stepping boldly to the right hand door, pushed it open.

For a moment they could only gaze. The room they had entered was another and smaller blue-domed hall. Around its sides was a row of curious twisted benches of green material, each of which was now occupied by one of the Lassans, hood thrown back from head, elephant-trunk thrust into a large pool of some viscous green stuff with bright yellow flecks in it in the center of the circle. Half a dozen helmeted ape-men stood behind the benches of their masters, apparently serving them at this singular meal.

As the two humans entered there was one of those silences which are pregnant with events. Then, "Good evening, folks. How's things?" said

Marta and curtsied gracefully.

The sound of her words seemed to release the spell. With a bellow of rage the nearest Lassan leaped from his bench, fumbling at one of the pouches in his cloak.

The light-gun! thought Sherman and braced himself to spring, but another of the masters extended his trunk and detained the first. There was a momentary babble of rumbling conversation, then one of the Lassans reached behind him, picked up a helmet and placed it on his head and, attaching a tube to one of the ape-men, rose.

The ape-man moved toward Marta and Sherman like a being in a dream. They turned to run but the Lassan produced a light-gun with such evident intention of using it at the first motion that they paused.

"Looks like we're in for it," said the dancer. "Oh, well, lead on Napoleon. What do we care for expenses?"

Under the direction of the Lassan the ape-man took them each by an arm and led them back through the hall of the metal fish, down among the machines, where two or three others stared at them curiously or lifted inquisitive trunks in their direction.

Then into another passage which had been one of the inevitable car-tracks. Their Lassan conductor reached around the corner into the passage, applied his trunk briefly to something and a moment later one of the cars slid silently into position. The door opened.

"So long, old pal," said Marta Lami. "Even if I never see you again we had a great time together."

"So long," replied Sherman, taking his place in the car. He felt a distinct pang at leaving this dancer—vulgar and flippant but gay and debonair and the best of companions.

The car did not take them far. It discharged Sherman in a little passage before a narrow door, which opened automatically to admit him to a small blue-domed room contain-

ing nothing but a seat, one of the benches on which he had seen the Lassans reclining and a mass of wires and tubes.

There seemed nothing in particular to do. He was at liberty save that the door closed firmly behind him, cutting off escape. Seeing that he was left alone he seated himself and began to examine the machinery, most of which was attached to his chair.

CHAPTER XV

THE LASSAN EXPLAINS

BEFORE he had time to riddle out any of its secrets the door opened again and one of the Lassans came in—a distinctly different type from any he had hitherto seen. This one was smaller than most. His skin, where exposed, was covered by a tracery of fine wrinkles and his coloring was whiter than the rest.

Little crowsfeet stood around the corners of his eyes, giving him an expression that was singularly humorous. He approached Sherman on noiseless feet, moved his trunk up and down as though examining him. Then, producing from a pocket in his cloak one of the thought-helmets, he set it on Sherman's head, tightened a connection or two with his trunk and, placing a like device on his own head, settled himself on the twisted bench.

The ordeal of the helmet! "They make you think whatever they want you to—it's like being hypnotized," Marta Lami had said. He braced himself resolutely. This alien intelligence should not plumb his thoughts without a struggle.

To his surprise there seemed no attempt to force his mind. The thought leaped up, unbidden, *Why, this—this Lassan is friendly!* No definite image or plan or connection of ideas formed itself in his brain.

He merely felt enormously soothed and strengthened. After all, he found himself arguing, nobody desired to hurt him—merely to discover what curious process of thought had led him to act as he had.

"You are too intelligent, too high a type to have been put to work at the machines," came the unspoken thought of the Lissan. "We might better have put you at the controls of one of the fighting machines." This thought caused a mental image of the giant silver fish he had seen in the hall of the dome to rise in his mind. He pictured himself as seated amid a mass of levers before a panel set with complex gauges.

"It was a mistake," the thought he was receiving went on, "that you were sent there. The Alphen of the mental department, who had your case in charge, should have known better. You earthmen make much better machines than the ones we brought with us. You do not even need the helmets in order to control. Some of you are even capable of understanding and operating the lights."

This, he explained afterward appeared not as a consecutive sentence in Sherman's mind, but as a succession of ideas, almost as though he were thinking them himself. With the word *lights* a complex picture presented itself, involving the light-guns and a large amount of other complex apparatus, whose exact uses he did not then or later understand, but which he felt he understood at the moment.

"Now," the Lissan's thought went on, "I don't blame you for being frightened and trying to run away but you know we are different and I don't quite understand what frightened you. You were working at a machine, were you not?"

And, as Sherman unconsciously thought of himself sticking his fingers in the apertures of the machines, "I thought so. What happened?"

Unbidden the memory of the ex-

plosion came to him. Again he heard the Lissan's step in the corridor, saw the guard move aside, the sputter from the cable, the explosion. Then his memory jumped to the moment of tugging at the stones with the roar and heat all round and the white-hot stream in pursuit.

A vague but sympathetic thought reached him, followed by a question, "But what made that happen? You're intelligent, you understand these things, you are a mechanic—what made it happen?"

With a start of surprise Sherman realized that the Lissan had been leading him gently along from place to place—to trap him! He struggled desperately to keep the thought of the short-circuiting of the guard's helmet from his mind, struggled to think about anything else at all—thought of a plate of steaming corned beef and cabbage, of the multiplication table— $5 \times 5 = 25$, all in neat rows of figures, thought of how to control a plane that had gone into a tailspin.

The pressure suddenly relaxed, the mind opposite his became friendly again. Once more he received the vague intimation of sympathy and understanding, even of admiration of his mental strength.

"Why," the thought was telling him, "you have quite as much mentality as a Lissan! That is a very high compliment. I have never before met one of the lower animals who could withhold his thoughts from me. It is most extraordinary. Is it possible for you to withhold your thoughts from your own kind as well?"

Not at all difficult, thought Sherman, relaxing a bit. Indeed the difficulty in human communication lies not in withholding thoughts but in expressing them.

His interlocutor went on, "Ah, but the feeling, the thought is generally understood though it may not be clear. Tell me, have you never withheld a thought from someone who wished to know it?"

Yes, thought Sherman, I have—and remembered the poker game at the Cleveland airport when he had drawn two cards and unexpectedly filled a straight flush to win the biggest pot of the evening from Barney's full house.

Of the time when he had thought of numerous unpleasant ways of slaying the mechanic who had left a leak in his oil-line, of the time when a girl had tried to gold-dig him and he had divined her attention first, of the time when he had lifted the knife!!!

Again that jar! He realized with a start that the Lassan, having failed to pick his brain with friendliness, was trying to do it with flattery. The realization so filled him with anger that he had no difficulty in resisting the pressure that was applied to make him tell what had happened in the machine-room at the end of the passage.

ONCE more the pressure relaxed. The Lassan was congratulating him again. "No, this is sincere this time and not flattery. You win. I shall not try to make you tell me again. We can probably obtain it from the other one anyway.

"Oh, man of a debased and alien race, I salute you. If your race were all like you we might breed you for intelligence and live in cooperation with you. It is almost a pity you had to be mechanized. If there is any information you wish, I will gladly exchange with you.

"We have seen your homes and we are curious—imagine living above ground—and from others of your race we know that you have many fine machines, almost a civilization in fact. We would willingly know more of it and in return will tell you of our accomplishments."

Could this offer conceal some new trap? Sherman wondered but the Lassan divined this thought as soon as formed, and reassured him. "Since we now live here and since there are so few of your folk left it

is important that we know about each other. We must live side by side—why not in friendship?"

The offer seemed fair enough. At all events if there were any injudicious questions he could turn them aside and there was a good deal he wished to learn—about his mechanized body, the purpose of those curious machines, the blue-domed halls, the silver fish, the interweavings of this underground city, where the Lassans had come from. He assented.

"Good," the message reached him. "Suppose you ask a question and then I will. What do you wish to know?"

"How I was made into a machine."

"I do not know that I can explain it to you. I perceive your knowledge of the nature of light is elementary. But the material with which we surrounded the space-ship in which we came, in order to protect it from the radiation of suns unknown to you, has a powerful action on all animal substances.

"It is a material not unlike your radium but a thousand times more powerful. When we reached your planet your atmosphere carried it to every part of the earth and all living things received it. Those who were most affected by it were turned to metal which retained that quality called 'life' within its interior reaches. The others became merely solid metal.

"Our birds are under instructions to bring us all such individuals as possess life. In our laboratories we make their forms over, so they will be useful to us as servants. Those who have become solid, of course, nothing can be done for.

"We have found in the past that when we take a new planet and make the individuals over into machines—unless we return them to familiar surroundings they lose their brains when they reawake. Therefore you woke in the same place in which you passed from consciousness."

"Wonderful," said Sherman, "and

where do you come from and how did you get here?"

He felt the Lassan's amusement. "That is two questions you have asked, not one. Nevertheless I will answer. We come from a planet of another star, very far away—I do not know how to express it to you. Your methods of measurement for these things are different from ours."

In Sherman's mind appeared a picture of the night heavens with the tremendous ribbon of the Milky Way swinging across its center. His attention was directed to one star, a very bright one.

"*Rigel!*" his mind called and the thought went on. He was suddenly transported to the neighborhood of the star, felt that it was ages ago, long before the earth had cooled. He saw that the star, then a sun like our own, was threatened by some enormous catastrophe, a titanic explosion.

Abruptly the picture was wiped out and he beheld the comet, the great comet the earthly astronomers had watched for so long before it struck on that fateful night. He realized that it was no comet but an interplanetary vehicle bound from the planet of Rigel to the earth.

"But how—" he began to frame another question. The Lassan cut across it firmly. "It is my turn to seek information now. We are interested in the machine that brought you here—the bird machine. How does it operate?"

Sherman imagined himself in the airplane's seat, operating the controls. As well as he could to a strange type of mind he explained how they worked. "But what drives it?" insisted the Lassan. "I do not understand. No, not the queer thing at the front that turns round. We have that principle ourselves. But the thing that makes it turn."

FOR answer Sherman tried to picture the interior of the engine and show the gasoline exploding and

driving it. The mind opposite his became thoughtful at once, then flashed a question. "Are there many—explosives—in this earth?"

Sherman pictured gunpowder, dynamite and all the others he could think of. He at once sensed that the Lassan was both astonished and troubled. Something like a mental curtain which he could not pierce dropped between them. A moment later the elephant-man rose.

"That will be sufficient for the present," he flashed and came forward to remove the helmet from Sherman's head.

A few moments later the door was swung open. Sherman saw that one of the cars was waiting for him with the word EXIT beckoning him and he was soon back in his cage.

As nearly as he could judge time he was left alone for quite twenty-four hours before being recalled for further questioning. As soon as he entered the interrogation room he perceived that something serious had engaged the attention of the Lassans. The seat was prepared for him as before but instead of one of the twisted benches there were now three.

His acquaintance, the old Lassan, occupied the center one. On one side was a chubby elephant-man whose obesity gave a singularly infantile expression to his features and on the other a slender-limbed type as though by contrast. All three had tubes connected to the helmet which was placed on his head but he soon recognized that the older Lassan was the only one to ask questions.

"We wish to ask you about these explosives," came the message. "Are they all alike?"

"No," he answered instantly.

"What causes them to explode?"

"I am not a chemist. I don't know." The idea of chemistry was slightly unfamiliar to them. It was apparent from their thoughts that chemistry had never occurred to them as the subject of a special study.

Then came another question. "Are there many chemists?"

An idea struck Sherman. He closed his mind resolutely against the question and flashed back the message that he came to learn as well as teach. He sensed a certain annoyance among the new auditors but the old Lassan answered, "That is only just. What do you wish to know?"

"What the machines are for."

"In the center of this as of every other earth lies the substance of life as it lies at the heart of every sun. The machines pierce to it and draw it up for our uses."

"What is this substance of life?"

"You would not understand if we told you. Sufficient that it is nothing known on the surface of your world. Your idea that most nearly approaches it is"—he paused for a moment, feeling about in Sherman's mind for the proper expression—"is pure light, light having material body and strength. Now let me ask—do you use explosives as we use the substance of life to fight your enemies?"

"Yes."

"What weapons do you use them in?"

Sherman thought of a revolver, then of a cannon.

"And do these weapons act at a distance?"

"Yes. May I ask a question?"

"If it is a brief one. This interview is important to us."

"How many of your people are there on the earth?"

"It is inadvisable to answer that fully but there are some hundreds. Now tell us, are there any of these weapons near this place?"

Sherman thought. West Point—Watervliet Arsenal—Iona Island, leaped into his mind. All three Lassans leaned back with a sigh of satisfaction and exchanged thoughts among themselves so rapidly that he could not follow the process.

Then the two younger Lassans disconnected their helmets and the older one said, "We are disposed to

be generous to you. We will demonstrate one of our fighting machines to you if you will show us how to use these explosives."

There could be no particular harm in it, he argued. The army was a thing of the past and if there were other people out in the world and he could take them a knowledge of the Lassan fighting machines it would be of as much value as any information he could give. He agreed.

The old Lassan rose. "You will retain your helmet. It is a rule that none of the lower races are allowed in the fighting machines without them and you would be unable to control one without our help in any case."

The car carried them to the blue-domed hall where he and Marta Lami had hidden behind the shining fish. A little pang of loneliness leaped up in him at the sight. He wondered where she was and whether she had been sent back to the machines.

"No," the Lassan's thought answered his, "the other servant has not been returned to the machines. Many of them are not working as a result of the recent trouble and the servant has been placed on other work instead. But I do not understand your idea that the other servant is somehow different from you."

"Do the Lassans then have no sex?" the thought raced through his brain.

"Sex? Oh, I understand. The difference between two of the lower soft races that makes reproduction possible. Our birds have it. No, we have abolished it of course, as all higher races have. Our young are produced artificially."

CHAPTER XVI

A DASH FOR FREEDOM

THEY stood before the big machine. "You must do exactly as

"I tell you," the Lassan informed him. "The machinery of this instrument is very delicate. To enter you must reach up there by that fin and insert one of your fingers in the hole you will find."

As he did so Sherman saw a door, so closely fitted that when it closed there was no visible seam in the metal, swing back. They entered.

The interior of the machine was disappointingly smaller than its outside would have led one to expect. A narrow walk, railed on both sides, led down the center to the forward part. Along and slightly below this walk was a row of instrument boards not unlike those of the mining machine and at each of these one of the ape-man lay, helmet on head, apparently asleep.

"No, not asleep," the Lassan told him, "they do not require it like all your mechanical servants. They have merely been thrown into a state of nothingness till we need them."

At the prow of the machine the catwalk widened into a control chamber. One of the Lassan couches was here and above it dangled a helmet which was connected with those of the slumbering ape-men. The Lassan removed the helmet he wore and exchanged it for this. Before this was another seat in which Sherman took his position.

A complex of controls surrounded him, most of them with the finger-holes which were the ordinary Lassan method of handling machinery. Directly in front of this seat was a ground-glass panel, now dark, but which lit up as soon as the Lassan had connected up his helmet to give an accurate picture of the hall in which the fighting machine stood.

"And can you see to a distance?" Sherman wondered. The answer he received was either confused or beyond his comprehension. He gathered that the four-winged birds of the Lassans acted in some way or other as their scouts, remaining in a kind of telepathic communication with the Lassan in the fighting-machine

they were assigned to help.

Sherman was surprised to find how readily the enormous bulk and weight of the thing handled under the Lassan's skilled control. He understood without definitely asking that the power was furnished by that substance of life to which the Lassan had referred—in some way connected with the absolute destruction of matter.

The door swung open before them, leading them down a passage that went up for some distance, then through an immense room where some twenty more of these giants lay stored, through it and with surprising suddenness into the bright sunlight of a Catskill autumn day.

As they emerged the viewing plate swung round to show them three of the big four-winged birds whirring up from some unseen covert, spiraling into the air above them and flying level with them to form an escort.

Like most transport pilots, Sherman held a commission in the Army Reserve and had been to West Point. It was not difficult for him to guide the great fighting machine there, to find a field gun and ammunition and load it into the fighting machine.

He knew very little about artillery of any kind but when they returned to the door of the Lassan city he was enough of a mechanic to get the shell into the breech and find the firing mechanism. The gun went off with an ear-splitting crack and the shell whistled down the valley to burst against a green hillside, where they saw a graceful pine dip and fall to the shock.

At that moment such a sense of disturbance and alarm invaded Sherman's mind as he had never felt before. He looked around. The Lassans who had poured out of the city to see the experiment with the gun were gathered in a tight knot, eagerly conversing with one another. The old Lassan who was conducting him turned round abruptly.

"Into the fighting-machine at

once," he commanded. "Our birds have sent a message that they are being attacked by some strange creature of your world."

As Sherman climbed through the door of the fighting machine he glanced over his shoulder to see, far down the valley a black speck against the sky. An airplane? He wondered and it suddenly occurred to him that however great his thirst for information he should have kept his knowledge of guns from the Lassans.

If there were other people alive out there in the world the day might come when there would be a battle—and explosives were as new to the Lassans as was the light-ray to the children of men.

After that it became a struggle. Sherman found he had to be constantly on his guard. Constantly he had to conceal knowledge from the probing insistent mind-helmets. The Lassans seemed interested in only one subject now—human methods of making war, human guns, human armor, human ships.

Once they brought him an encyclopedia and as he held it on his lap went over every word of the articles on military subjects, questioning and cross-questioning him. Fortunately it was an old encyclopedia and he knew so little about it that in most cases he was able to throw open his mind and let his opponents see that it lay empty on these subjects. And still they were not satisfied.

Yet if he gave information he also received it. For little by little an understanding of the subtle material they called pure light became part of his mental equipment.

ONE day, as he returned from a long session in the questioning room and his cage clicked into position behind him, he was startled by a cheery strident voice.

"Well, well, if it isn't my old chum, Herbie. How's the boy?"

Sherman looked around. In the next cage was Marta Laml, grinning and extending her hand through

the bars.

"For Heaven's sake!" he said and took the offered hand. "How did you get here?"

"How does anyone get anywhere around this place? In one of those patent Fords of theirs."

They gazed at each other for a moment, too glad of a familiar face to make the ordinary banal remarks. The dancer spoke first:

"Well, did they put the screws on you, big boy? They tried to pump me about the accident but all I'd think about was how good Broadway would look with all the lights and they didn't make much out of it."

"I'll say they put the screws on me. They've had me in there every day since, trying to find out something about guns."

"Guns? Ain't they got that light-ray? They could give cards and spades to all the guns in the world with that. Wait a minute, though—" She thought for a moment. "Do you know, I think they're scared yellow about something and I'll bet a hundred dollars against a case of full-strength Scotch I know what it is."

"Spring it. They keep pumping me and I'd like to know what it's all about."

The dancer glanced around. On the far side of her cage was an inattentive ape-man, tossing his oil-ball about. Across the corridor was another. "Come over here," she said. "They haven't put me next to you for the fun of it and they may have a dictaphone stuck around somewhere."

Obediently Sherman approached the bars of the cage.

"They put me to work making those fighting-machines," she whispered. "You know, those big shiny things like we hid behind that day we tried to make the break. They had the helmets on me most of the time because I didn't know how to use their tools and machines and I got a lot of what the guy that was running me was thinking about. He was nervous about something, and I

think it was because there are some people outside going to take a whack at these babies."

"People like us?" asked Sherman.

"I don't know. I didn't get it very good but I think they're ordinary flesh-and-blood people. They came and got a lot of dopeys from the room where I lived the other day and put them in one of the new fighting-machines and took it out. It never came back."

"Mmm," said Sherman, "do you s'pose that was because it got cracked up or because they took it somewhere else?"

"Dunno. But something's stirring."

If the Lassans had set a dictaphone or some similar device to spy on them there was no sign of it in the conversation which Sherman's interrogator held with him during the next period. But when he saw the dancer again she beckoned him silently to her side and producing a book from one of the drawers in her lectern began to trace letters on it with a fingernail dipped in grease.

Be careful what you say, she wrote. They know what we're talking about. They pumped me.

He nodded. "Well, kid," he said aloud. "What do you think? Will you ever make dancers of these Lassans?"

She giggled her appreciation of this remark for their unseen audience. "I'll say I won't. They're too slow on their pins. Rather sit still and suck up that green goo than do anything. What would I give to hear a good Latin band!"

"If I had a hand-organ now," said Sherman, "we've got the monk." He nodded toward the ape-man, while with his own fingernail he wrote, *How's chances of getting out of here? Do you know the way?*

"I'll speak to one of the big shots tomorrow," she said aloud. "Maybe we can get him to let us run a show." On the book's flyleaf appeared the words. *Only from the workroom on. It has an outside door.*

"How would I do as a dancing partner?" asked Sherman. *Good, he wrote. I've doped out how to work these cars. Are you game for a try at it?*

"You haven't got the figure," she said. "I'd rather dance with that old papa Lassan that does the questions." *Sure, she wrote, any time you say.*

They broke off the conversation at this point and Sherman set himself to study out a plan for escape. He had watched the cars intently both inside and out. The same needle arrangement that released the cage bars apparently actuated the mechanism of the car doors and it was located inside.

This meant that he could secure admission to the same car that carried the girl and with luck would be able to get out at the same time she did. What to do after that was a matter of chance and inspiration. If only he had a weapon! The oil and grease balls. They would do to throw—might spoil a Lassan's aim or check the rush of one of the ape-man servants.

AS FINALLY arranged between them the plan was that he was to get in the same car she did. She would tap on the back of her compartment to assure him that everything was in order, tap again when the door opened for her to get out. He would leave her a second to get her bearings, then they would make a rush for it.

He weighed the usefulness of the knife as a weapon and discarded it—too clumsy for throwing and in a close struggle with one of the ape-men slaves, made of metal like himself, it would be quite useless. But another tool, rather like a short-handled and badly shaped hammer, he did take.

At last the hour arrived. The car ran down the line of cages, paused, opened before Marta Lami's. She smiled at him, nodded, purposely delayed getting in. He fumbled des-

perately with his needle, fearing he could not make it. Then it went home, the little arm at the bottom of the car swung out and its door opened. As he stepped in he heard the dancer's tap of encouragement from the compartment ahead.

Evidently it was some little distance to the workroom. The car made several stops on the way but Sherman, braced and ready, listened in vain for the tap that would tell him they had reached their destination. At last it came—two soft knocks.

He bent, thrust home the needle. The door slid back and he stepped out into one of the blue-domed rooms. His eyes caught a fantastic maze of machinery, helmeted ape-men busy at it, beyond them the huge forms of several uncompleted fighting machines.

The dancer gripped his hand. "This way," she said, pointing along the wall past the machines. "Take it easy. Don't run till they notice us."

A feverish passion for activity burned in him. "Hurry, hurry," called every sense but he fought it down and followed Marta Lami down the line of machines, past the impassive ape-men.

They made over half the distance to the door before they were spotted. Then one of the Lassans, who had sauntered over to the car stop, evidently expecting Marta, missed her and looked around. The first warning the two had was a sudden flickering of the blue lights here and there among the machines.

"Come on," shouted Marta. "There she goes!"

Sherman looked over his shoulder, saw the Lassan tugging at his pouch for a ray-gun, paused to throw one of the oil-balls, straight and true, as one pitches a baseball. It struck the elephant-man squarely between the eyes at the base of this trunk. He squealed with pain and fright and, dropping the ray-gun, ran behind the machine. For a second all the eyes in the room turned toward him.

Then with another flickering of lights the hunt was up.

Sherman saw a helmeted ape-man at a machine just ahead turn slowly round, gazing vacantly, then fling himself at Marta. As she sidestepped to avoid his rush, Sherman swung a left from the heels. The metal fist took the slave flush on the jaw and down he went with a crash. The dazzling spout of a ray-gun shot past them, spattering against the wall in a shower of stars, and they had reached the exit.

"Come, oh come!" shouted Marta, tugging at the heavy door. Sherman pulled with her and at that moment another ray-gun flash struck it, just over their heads. The door gave suddenly. They tumbled through.

Into a gray twilight they struggled, shot with little dashes of rain that had beaten the valley to mud.

"Golly!" said Marta, struggling through the gelatinous stuff. "If I live through this I'll live to be forty."

"No, not that way," called Sherman. "They'll look for us down the valley. Come on, up the hill."

He pulled her upward. They slipped, stumbled, slid, gripped the stump of a tree, then another. Below and behind them came a confused rumble and they heard the great door swing open again. A burst of light, like a star in the cloudy dark, broke out and Sherman pulled the girl down behind the stump of a huge tree.

"What do you s'pose they'll bring after us?" he whispered, his lips close to her ear.

"Dunno. One of the little machines maybe. Look."

Sherman peered cautiously round his side of the stump. In the valley beneath them, shining brilliantly in the pure white light it had released, was one of the metal fish—one smaller than the usual fighting machine and without the projecting trunk.

"We've been working on them for awhile," the girl whispered. "I don't know what they're for but they

aren't fighting machines."

Remembering how the visionplate of the fighting machine he had controlled had reflected every object within range, Sherman made himself small behind the stump. The machine below was probably trying to locate them in the light it had released.

"Wonder they don't bring the birds out," he thought. As if in answer to this idea one of the four-winged creatures strutted around the machine, blinking in the light, then took off with a whir of wings, and spiraled upward.

The light went out, reappeared as a beam pointing down the valley, and the machine moved off, slowly sweeping the sides of the hills with its pencil of illumination. He could see the multiple glow of the tubes at the stern, greenly phosphorescent, as the machine progressed. High above the bird screamed shrilly.

CHAPTER XVII

MARTA'S SACRIFICE

PROGRESS up the hillside was slow. It had become completely dark. They were without any means of making a light, would not have dared to make one if they could. The mud was tenacious, the constant contact with stumps and rocks both irritating and difficult.

But at last in their fumbling way they reached a spot where the denudation gave place to a line of trees, looming dark and friendly overhead against the skyline and after that they went faster. Where they were or what route to take neither had any idea. That portion of the Catskills is still as wild as in the days of the Iroquois, save for the few thin roads along the line of the valleys and these they dared not seek.

They solved the difficulty by keep-

ing to the hillcrest till it ran out in a valley, then rapidly climbing the next hill and proceeding along that in the shelter of the forest. Though they necessarily went slowly they did not halt. Neither felt the need of rest or sleep, their metal limbs took no serious bruises and the slip of the hill kept them from running in circles as people usually do when lost in the woods.

Just as the eastern sky began to hold some faint promise of dawn they came upon a farmhouse in a clearing at the top of a hill. It was an unprepossessing affair with a sagging roof but they burst in the door and went through it in the hope of finding weapons and perhaps an electric battery. Both were used to the bountiful electric meals of the Lassans and were beginning to feel their lack.

The best the place afforded, however, was a rather ancient axe, of which Sherman possessed himself, and a large pot of vaseline with which they anointed themselves liberally, for the continued damp was making them feel rusty in the joints.

They pressed on, and did not halt to consider the situation till full day had come.

"Where do we go from here?" asked Marta, perching herself on a tree-bole.

"South, I guess," offered Sherman. "They may be looking for us there but we've got to find a city and get some things."

"There's Albany," she suggested.

"Yes, and Schenectady and they have a lot of electric power there we could use. But I vote for New York. If we head in there I can pick up a plane at one of the airports and fly right away from them."

"Well, it's a chance," she said. "Come on," and as they forced their way through the underbrush, "You know, from what I understood of those Lassans' thoughts, they've got something hot cooking. I'm almost sure there are other people in the

world and they're getting ready to fight them."

"Let 'em come," said Sherman grimly. "That light-ray won't stand the chance of a whistle in a whirlwind when they get after them with heavy artillery and airplane observation."

"That's just where you're off-beam," replied the dancer. "They've been figuring on that for a long time. They got a gun from somewhere and they've had all their fighting machines out, shooting it at them and then armoring up the fighting machines to stand it. And they're building guns of their own to shoot those light-bombs. I ought to know. I was on the job."

Sherman cursed himself inwardly. So that had been the result of his exchange of information with the old Lassan who was so anxious to know about guns. "How do they get away from it?" he asked.

"Well, I don't quite know," she said. "I'm a sap about stuff like that. All I know is what the guy that was controlling me thought about and let me have without knowing it."

"But I got this much out of it—that the outside of these fighting machines is coated with this 'substance of life' they talk about some way, so it's a perfect mirror and reflects everything that hits it, even shells. The coating reflects their light ray too but it has to have a lead backing for that. It's no good without the lead. Seems like lead will stop that light-ray every time."

"I wonder how about big guns," murmured Sherman.

"Don't know. I didn't get anything like that in what the boss was thinking. He seemed to imagine the gun he had was the biggest there was."

They toiled on. As they progressed southward the thinning forest and the increasing walls of the cliffs drove them farther and farther toward the river till they were forced to take to the main road willy-nilly. Along it they could walk faster but

there was more danger. They watched the heavens narrowly for any sign of the four-winged birds but the skies seemed deserted.

AT KINGSTON they found a filling station and, kicking in the door, located a couple of storage batteries that supplied them with a needed meal. "What do you say to a car?" asked Sherman.

"Maybe yes, maybe no," said the dancer. "It's running a chance, isn't it? Still, we're getting nowhere fast this way. Let's try it."

Finding a car in running order was a procedure of some difficulty and Kingston seemed a weaponless town, though Marta finally did locate one little pearl-handled .25-calibre pop-gun. Sherman eyed it dubiously.

"That's a good thing to kill mosquitoes with," he remarked, "but I don't think it will be much use for anything else."

"Boloney," she replied. "These Lassans are yellow from way back. If I stuck this under the nose of one of them he'd throw a fit. Come on, let's go."

Eventlessly, the road flowed past under their wheels—Newburgh, Haverstraw, Nyack—one, two, three hours. Then, just south of Chester the dancer suddenly gripped Sherman's arm.

"What's that?" she said. "No, over there. Isn't it—?"

But in one swift glance he had seen as clearly as she. Like a living thing, the car swerved from the road, dived across the ditch and, losing speed, rolled to a halt on the green lawn of a suburban bungalow. Sherman leaped out.

"Come on, for Pete's sake," he cried. "It's a fighting machine. If they've seen us they'll start shooting."

Dragging her after him he dived around the house, through a seedy flower-garden, down a path. As though to lend emphasis to his words there came the familiar buzzing roar. As Sherman dropped, pulling the girl

flat on her face after him, they saw the wall of the bungalow cave in and the roof tilt slowly over and drop into the burning mass beneath. A vivid blue beam, brighter than the sunlight of the dark day, swept across the sky, winked once or twice and disappeared.

Marta would have risen but, "Take it easy," said Sherman. "If they see us they'll pop another of those tokens at us."

He wriggled along on his stomach, picking up weeds in his body plates in the process and making for the shelter of an overgrown hedge that ran behind the next bungalow.

"Look out," called the dancer suddenly. "Here come the birds."

She waved her hand up and back and by screwing up his eyes Sherman could just make out a black speck against the clouds, far to the north. They cowered under the shelter of the hedge and lay still scarcely daring to whisper.

The Lissan in command of the fighting machine was evidently not satisfied that he had hit them with his hasty shot. Peering through the stems they made out the shimmering form of the machine, sliding slowly past the burning house, its snout moving hither and thither questioningly. It passed through the garden, went on down the path. The bird swung to and fro overhead—nearer. Evidently it had noticed the prints their feet left in the soft ground.

"Listen, chum," said Marta Lami, "get through and find some people, then come and get me out of that hell-hole up there. If they see me they'll let you alone."

"No!" cried Sherman but she was already running out across the field. The snout of the machine lifted toward her as though to deliver a blast, then rose and discharged another beam of blue light. Sherman heard one of the birds scream in answer, saw it sweep down on soaring pinions and in a single motion snap the dancer up and away. The shimmer-

ing fighting machine swung round and turned back toward the road.

He lay still until he was sure it had gone. Then, moving carefully for fear of the terror from the skies, he crawled to the next bungalow. It yielded treasure-trove in the shape of a flashlight and a serviceable revolver. Securing a sheet from one of the beds to wrap around him as a loin-cloth he set out to trudge to New York.

After a time it occurred to him that the disaster had taken place not because they were in a car but because it had been driven unreasonably fast, and without precaution. He looked for and ultimately found another one and, keeping to the back streets and driving slowly, worked his way toward the city again.

Then another idea came to him—Newark had an airport as well as New York and it was far nearer. He changed the direction of his advance, swinging west to avoid the long bridges over the Passaic River. Bridges were focal points. The birds would surely watch them, intelligent as they were.

Late in the afternoon he spied one of them, far ahead and flying southward, but took no chances. He drew his car to the side of the road and remained motionless for long after it had disappeared. When evening came on he had already reached the outskirts of the city and could proceed without headlights.

NEWARK was a dead city, the diminished purr of the motor ringing curiously loud in the silent streets. Their complications bothered him. He was unfamiliar with the town and his flashlight gave out long before he reached his destination. But he kept steadily on, certain that the airport was somewhere south and east of the city. Toward late evening a fine cold rain began to fall, congealing to ice on the streets and on his metallic body.

The airport was just as he had remembered it on the first day of his

awakening—it now seemed uncountable ages in the past. The little sports plane still stood on the platform, its torn wing dangling. The hangars were all locked. He was an inefficient burglar and spent an hour or two breaking one open and when he did found nothing but a rocket-plane requiring special fuel that he did not have.

The next hangar yielded a helicopter and a trainer. He had no watch but was sure that the night was passing fast. Not wishing to be abroad by daylight with an airplane he decided to chance it on the helicopter. Luckily she was full of fuel and everything seemed tight. With some labor he removed the chocks and managed to wheel the machine out.

Not till he had it in the air did the thought of what direction he was to take occur to him. Boston—New York—Philadelphia—Chicago—he remembered how the astronomers had predicted that the comet would fall, probably, somewhere in New York State.

If there were a borderline along which Lassans were meeting humans in any kind of conflict it was most likely to lie southward. With this thought in mind he turned his plane to the south and, keeping the white line of foam along the coast beneath him as a guide, began to let her out.

The ceiling was low. Between clouds and fitful squalls of rain, flying was difficult and the weight of Sherman's mechanical body seemed to make the machine move logily. It must have been all of an hour and three quarters later that he saw beneath him the tossing whitecaps of Great Bay, with the ribbon of Wading River running back into the distance. Just beyond, he knew, lay Atlantic City.

He was debating with himself whether to land on the beach there or hop across to the Philadelphia airport when, sharp and clear from somewhere ahead and below him, came the sound of gun-fire. He tried

for altitude, but only ran into clouds. Nevertheless the sound was unmistakable and as he approached it became clearer and more pronounced, a long intermittent beat, heavy guns and light mingled together, off to the right. There was fighting going on!

Exulting in his escape from the Lassans and in the fact that he could take their opponents information that would be of value, he swung the autogiro toward the sounds that became clearer every minute. He was getting right over them now. He could see red flashes along the horizon. Down there they were locked in battle—men and Lassans, his own people and the invaders from faraway Rigel.

Suddenly a beam of light-ray leaped from the ground. Sherman thought it was directed at him, tried to loop the plane and cursed as he remembered helicopters wouldn't loop—then saw that the light was not aimed in his direction but at some object on the ground.

He banked the copter over and swung lower. Undoubtedly a Lassan fighting machine—and the beam was hitting things, things large and solid, for they collapsed under the stabbing ray. A red flame rose over the wreck. The roar of an explosion reached his ears. The battle-line!

He soared again. He must reach the headquarters of whatever men were down there. The information he could bring and that Marta Lami had given him might make all the difference between the loss of the world and its salvation.

"... perfect mirror—reflects everything that hits it, even shells, but they don't know about the big ones. . . . The lead will reflect their light-rays too. . . . no good against lead. Their armor is made of the same stuff. . . ."

In the darkness beneath him troops were moving. He could catch glimpses of dark masses on the roads. Somewhere down there he distinctly heard the call of one of the

four-winged birds, quite near. Then with a rush it was suddenly upon him.

He set the automatic pilot and drew his revolver, but the bird, unfamiliar with the machine it was attacking, had dashed recklessly in. There was a rending screech as it came into contact with the rotor of the copter. Sherman got in one shot and then bird, man and plane tumbled toward the earth.

CHAPTER XVIII

THE END OF THE LIGHT-RAY

"THE Lassans?" said General Grierson, in a puzzled tone, looking at the sheet-clad apparition. "You mean these—mechanical monsters?"

Sherman winced. "Like myself? No, sir, those are their slaves. I thought you were familiar with them. They are elephant-men and quite different."

"I meant those long, shining objects that shoot that light-ray of theirs. Their guns shoot it out in packages but we can understand that and deal with them. Our artillery is just as good. But if we can't stop those shining things there will be no army left and that means no men left on this planet."

"This army is our last resource. If you know of anything, anything, that will stop them, for God's sake tell us! All we've found that does any good so far are the twelve-inch railroad guns and we have only four of them. One was knocked out by their shells this afternoon."

"You mean their fighting-machines," Sherman replied. "I'm not absolutely certain. I only know what I picked up from then and what Marta Lami"—he swallowed hard at the mention of her name—"the bravest woman in the world, told me. But I think that a shell with a

lead cap would go through those machines like a knife through a piece of cheese."

There was a tiny silence in the room at this momentous announcement. Then an artillery officer said, dreamily, "The armor-piercing shells the railroad guns use have lead caps."

As though his words had released a spell there came a quick drumfire of questions.

"What are they armored with?"

"What kind of a power-plant do they use?"

"Can you stop the light-ray?"

"What makes you think so?"

Sherman smiled. "Just a moment. One question at a time. I'm not sure I can answer them all anyway. As to what makes me think so and what they're armored with, they have a coating of steel armor but it isn't very thick."

"It's plated on the outside with a coat of lead and outside that with the substance they call pure light. I don't know what it is but it's the same stuff they use in the light-ray and in their shells and I know that lead sheeting will stop it, even when the lead is very thin."

General Grierson swung round in his chair. "*Hartnett!* Write out an order to General Hudson, Chief Quartermaster, at once. Tell him to remove every piece of lead he can find in Atlantic City and get it melted down. Also to set up a plant for tipping all shells with lead."

Ben Ruby leaned forward. "Can we get into their city, their headquarters, or whatever they call it?"

"I hope so!" cried Sherman. "Marta Lami's in there."

"All right, young man, you'll have your chance for that," said General Grierson. "Now suppose you tell us as much as you know about these—things. Every bit of information we can get will be valuable. . . ."

"Oh, by the way, Hartnett. Have an order made out to the infantry to cut the points of their bullets with their knives. That will make them dum-dum and bring the lead

out. Also another one to evacuate as much infantry as possible. They aren't going to be a great deal of use."

* * * *

In the factory of the Atlantic City Packing Company men were toiling, stripped to the waist, in an inferno of heat. The huge row of vats that had once held clams, oysters and fish to grace a nation's palate, now simmered with green-phosphorescent kettles of molten lead. The hand-trucks that once bore piles of canned goods to and fro, now pushed by blue-faced men in khaki, held long stacks of pointed shells. In at one end of the building they came in ceaseless procession, to pause before the lead tanks where the workmen took each shell and dipped its tip briefly in the lead, then returned it to the truck.

Out the other end they wheeled to be loaded in trucks, buses, limousines, everything that had wheels and would move, to be rushed to the maw of the ceaselessly crying guns.

For the offensive was on—the advance of the Lassans had been turned to a retreat. Along the water's edge, with its back to the sea and the steamers ready to pick up the survivors of the defeat of the last army of man, the last army of man had rallied—rallied and stood as the new lead-tipped shells began to come in and the artillery spouted them at the Lassan fighting-machines, no longer invincible invulnerable monsters, but hittable and smashable pieces of mechanism.

IT WAS Ben Ruby, in a tank shining dully with the new lead plating, who led the charge against the Lassan fighting machines on the first day of the battle, who, with his little division of American tanks, had encountered three of the huge Lassan monsters outside the city. For a moment, as though dazed by the audacity of this attack, they had done nothing at all. Then all three had turned the light-rays on him.

The deadly rays glanced off, danced to the zenith in a shower of coruscating sparks and the gun of the American tank spoke—once, twice. A round hole, with a radiating star-pattern running out from it, appeared in the nose of the nearest Lassan fighting-machine and it sank to the earth like a tired animal, rolling over and over, helpless.

The other two turned to flee, swinging their long bodies around. Surrounded by shell-bursts, riddled by the lead-tipped weapons, they too struggled and sank to rise no more.

After that there had been losses, of course. The Lassan shells occasionally burst in the back areas and claimed a toll. But the advance had gone on steadily for a whole day, unchecked. The Lassans were driven back.

And then, as suddenly as they had come, they disappeared. South African aerial scouts, far ahead of the army, reported there was no sign of the enemy in the whole of New Jersey. The dodos vanished from the skies, the fighting machines from the earth. The Lassans seemed to have abandoned the struggle and retired to their underground city to wait for the end.

"Frankly," said Sherman, "I don't like it. Those johnnies are too smart to give up like that. I'll bet you a thousand dollars against a lead bullet that they've gone back there to figure out some surprise for us. And when it comes it's going to be a beaner. Those babies may be elephants to the eye but there's nothing slow about their brains."

"General Grierson doesn't think so," said Ben Ruby. "He's all ready to hang out the flags and call it a day. He sent home two more divisions of infantry yesterday."

"General Grierson hasn't got the finest girl in the world locked up in that hole under the Catskills, burning her fingers off," said Sherman with a set face.

"Those babies aren't licked by a million miles. Their guns are just

as good as ours and that light stuff they put in them is worse than powder when it goes off. They just didn't have as many guns. I'm taking even money that when they come out again they'll have something that will make our artillery look sick."

They stood on a street-corner in Philadelphia, the new headquarters of the Army of the Federated Governments.

"Yes but what are we going to do about it?" asked Ben.

"A lot. For one thing we might go up there and try to bust in but I don't think that would be very hot. They'll be expecting it. What we can do though is get General Grierson to give us one of the laboratories here in town and some men to help us and dope out a few little presents on our side of the fence.

"I learned plenty through those thought helmets of theirs while I was in that place, though I didn't realize I was getting a lot of it at the time. Those helmets work both ways, you know, and they couldn't keep me from picking up some of their stuff, especially as they were so anxious to find out what I knew they didn't watch themselves."

"Nice idea," said Ben. "I know a little chemistry and between us we might put over something good. Let's go."

An hour later they were installed in their own experimental laboratory, just off Market Street, with enough assistants to help them with routine work and Gloria Rutherford and Murray Lee to keep them amused.

"All right, chief," said Ben when they were installed. "What do we do first?"

"Figure out some kind of armor that will stand off whatever kind of ray they pop up with, I guess," offered Sherman.

"May I stick my two cents in?" said Murray Lee. "I don't think that any kind of armor is going to do much good. For one thing you don't know what the Lassans are going to

produce. Those tanks we had were armored against the best kind of shells and the Lassans turned up with the light-ray that made them look like Swiss cheese.

"It's your show but if I were fishing for something it would be a way to sock those guys. In this kind of war the man that gets in the first punch is going to win."

"That light-ray of theirs is pretty good," said Ben. "From what you know about it already you ought to be able to dope out a pretty good heatray."

"No soap," said Sherman. "Too slow. They'll be all set for that anyway. It's right along the lines they think. No, what we've got to have is something along a new line and I'm thinking it can't be anything like a gun either. They're onto that now." He closed the door to the inner office with a bang.

"By the way," asked Gloria, "why don't the Australians send some airplanes up there to the Catskills and shoot up the Lassan headquarters?"

"Didn't you know?" asked Ben. "They tried it. They dumped about a hundred tons of explosives all over the joint and it might have been so much mud for all the good it did. Then they ran a railroad gun up there and tried to shell the door but that wasn't any good, either.

"They've got a signal station up there watching, waiting for them to come out and we'll just have to wait for that. Sherman"—he indicated the door behind which the aviator had retired—"is nearly bughouse. They've got his girl a prisoner in there."

"Tough break," commented Gloria. "Wish I could do something for the lady."

They talked about minor matters for a time, Ben speaking absently and cudgeling his brains for a line on which to work toward the new weapon. It is not easy to sit down and plan out a new invention without anything to start on beyond the desire to have it.

Suddenly the inner door was flung open. In the aperture they saw Sherman, his face grinning, a small piece of metal in his hand.

"I've got it, folks!" he cried. "A gravity beam!"

CHAPTER XIX

THE GRAVITY BEAM

"A GRAVITY beam!" they ejaculated together in tones varying from incredulity to simple puzzlement. "What's that?"

"Well, it'll take quite a bit of explaining but I'll drop out the technical part of it. You see, it's like this—you remember old man Einstein, the frizzy-hair Frisian, demonstrated that magnetism and gravity are the same thing down underneath?"

"And that some of the astronomers and physicists have said that both magnetism and light are the same thing? That is, forms of vibration. Well, one of the things I picked up from the lads in this Lassan city was that light, matter, electricity, gravitation, magnetism and the whole works are the same thing in different forms.

"They've just jumped one step beyond Einstein. Now they've got a way of producing or mining pure light—that is, pure matter in its simplest form. When it's released from pressure it becomes material and raises havoc all over the shop. How they get the squeeze on it I can't say. Anyway it isn't important."

"Very interesting lecture—very," commented Gloria, gravely.

"You pipe down and listen to your betters till they get through," Sherman went on. "Children should be seen and not heard. But what I've got here is a piece of permalloy. Under certain magnetic conditions it defies gravity. Now if we can screen

gravity that way, why can't we concentrate it too?"

"Why not? Except that nobody ever did it and nobody knows how," said Ben Ruby.

"Well, here's the catch. We can do anything we want to with gravity if we go about it right. What is it in chemical atoms that has weight? It's the positive charge, isn't it—The nucleus? And it's balanced by the negative charges, the electrons, that revolve around it.

"Now if we can find a way to pull some of these negative charges loose from a certain number of atoms of a substance there are going to be a whole lot of positive charges floating around without anything to bite on.

"And if we can shoot them at something it's going to have more positive charges than it can stand. And when that happens the something is going to get awful heavy. There are going to be exchanges of negative charges among all the positive charges and things are going to pop."

"Yes, yes," said Ben. "But what good does all this do? Give us the real dope on how you're going to do it."

"Well, with what I picked up from the Lassans I think I know. They know all about light and mechanics but they're rotten chemists and don't realize how good a thing they've got in lots of ways. Now look—if you throw a beam of radiations from a cathode tube into finely divided material you break up some of the atoms.

"Well, all we have to do is get an extra-powerful cathode tube, break up a lot of atoms and then deliver the positive charges from them onto whatever we're going for. That would be your gravity beam."

"How are you going to get radiation powerful enough to split up enough atoms to do you any good?" inquired Ben.

"Easy—use a radium cathode. The Lassans have the stuff but never think of using it seriously. They

think it's a by-product in their pure-light mines and just play around with it."

"Mmm, sounds possible," said Ben. "That is, in theory. I'd like to see it work in practise. How are you going to throw this beam?"

"Cinch. Down a beam of light. Light will conduct sound or radio waves even through a vacuum and this stuff I'm sending isn't so very different. Whatever we hit will act as an amplifier and spread the effect through the whole body."

"Boy, you want to be careful you don't blow up the earth," said Murray Lee. "Well, Gloria, I guess we're indicated to go out and dig up some radium. Let's fool them by going before they ask us. There ought to be a supply in some of the hospitals."

They rose and the other two plunged into an excited and highly technical discussion. When they returned the workmen had already constructed a black box, not unlike an enormous camera in shape, in the center of the floor. At its back and attached to it stood a stand fitted with a series of enormous clamps. Ben and Sherman were at a bench, working blowpipes and shaping the delicate iridescent glass of a long tube with a bulge at its center.

"Here you are," said Murray Lee. "I had to scrounge the Surgeon-General of the Dutch Colonial contingent to get this. He wanted to use it on some tuberculosis experiment. But I convinced him that he wouldn't be worrying about t.b. if the Lassans came out of their hole and stood the army on its head. How goes the job?"

"Swell," said Sherman. "Now you children run along and play. We're busy. We won't be finished with this thing before tomorrow afternoon if then."

AS A matter of fact it was the next evening before Murray and Gloria were summoned back to the laboratory. The device they had seen was now mounted on a stand of its

own, with long ropes of electrical connections running back from it, and had been pushed back to the end of the room. Opposite it was another stand with a two-foot-square piece of sheetiron resting on a chair in its center. The lens of the big camera was pointed in that direction.

"Now," said Sherman, "watch your uncle and see what happens."

He turned a switch. The tube at the back of the apparatus lit up with a vivid violet glow and a low humming sound filled the room.

"I decided to use powdered lead in the box," he explained. "It is the heaviest metal available and gives us the largest number of nuclei to project."

A second switch was thrown in and a beam of light leaped from the camera and struck in the center of the iron sheet, producing merely a mild white illumination.

"Poof!" said Gloria. "That isn't suchamuch. I could do that with a flashlight."

"Right you are. I haven't let her go yet. Hold your breath now."

He bent over, drove a plunger home. For just a second the only visible effect was a slight intensification of the beam of light. Then there was a report like a thunderclap. A dazzling ball of fire appeared on the stand; a cloud of smoke, and Murray and Gloria found themselves sitting on the floor.

The iron plate had completely vanished. So had the chair, all but two of its legs, which, lying in the center of the stand, were burning brightly. The acrid odor of nitrogen dioxide filled the room.

"Golly!" said Ben Ruby, seizing a fire extinguisher from the wall and turning it on the blaze. "That's even more than we expected. Look, it made a hole right through the wall! We'll have to keep that thing tied up."

"I'll say you will," said Murray, helping Gloria up. "It's as bad for the guy that's using it as the one

at the other end. Seriously you've got something good there. What happened to the iron plate?"

"Disintegrated. Let's see, where does iron come in the periodic table, Ben? Twenty-six? Then you'll probably find small quantities of all the chemical elements from twenty-five down in that heap of ashes. Phooey, what a rotten smell! That must be the action of the beam on the nitrogen in the air."

"There's a lot to be worked out in this thing yet, though," declared Ben, "and if you're right about the Lassans making a comeback precious little time in which to work it out."

"For one thing, we've got to get a searchlight that will throw a narrow pencil of light for a long distance. I don't think those elephant-men are going to let us poke this thing under their noses. And for another we've got to dope out something to keep it in and some way to furnish current for it."

"Can't you work it from a tank?" asked Murray, "and rig up a friction accumulator to work from the tracks?"

"I can but I don't like the idea," Sherman replied. "From the way those Lassans took to our airplanes I could make a guess that when they come they're going to come in some kind of flying machine. The dodos are no good in modern war. We'd never catch any kind of an airplane with a tank."

"How about an airplane for yourselves?"

"Too unsteady and too frail. I want something that will take a few pokes and not fold up."

"Say, you guys have less ingenuity for a couple of inventors than anyone I ever heard of," Gloria put in. "Why don't you get one of these Australian rocket-planes and fix it up. It's big enough to hold all your foolishness and if this thing is half as powerful as it looks, you ought to be able to harness it some way for a power-plant. Then you can

plaster your rocket all over with armor. I think—"

Sherman interrupted her by bringing his fist down on the table with a bang that made the glasses rattle.

"You've got it! By the nine gods of Clusium! With the punch this thing gives us used as a rocket we'd have power enough to fly to the moon if we wanted to. Why a rocket airplane at all? Why not a pure rocket? Let's go."

IT WAS another week before workmen, even toiling with all the machine-shop facilities of Philadelphia at their disposal and working day and night, could turn out the machine to Sherman's design. It was two more before the apparatus was installed. The trial trip was set for the early morning when there would be least chance of atmospheric disturbance.

The *Monitor*—she had been named for the famous fighting craft with which the American navy ushered in a new age in the history of war—now stood near the center of the flying field at the Philadelphia airport—a long, projectile-like vessel with gleaming metal sides, set with heavy windows, ten feet in diameter and nearly twice as long.

At her stern a funnel-like opening led to the interior. This was the exhaust for the power-plant. At her bow the sharp nose was blunted off and its tip was occupied by the lens of a high-powered parabolic searchlight, slightly recessed and with the discharge tubes for the atomic nuclei arranged around its edge so they would be thrown directly into the light-beam as soon as generated.

As the four approached her she had been placed on the ramp from which she was to start, slanting slightly upward, with a buffer of timber and earth behind it to take up the enormous recoil her power plant was expected to develop.

"How do you get in?" asked Gloria, walking around the *Monitor* and discovering no sign of a door.

"Oh, that's a trick I borrowed from our friends the Lassans," explained Sherman. "Look here." He led her to a place halfway along one side, where two almost imperceptible holes marred the shining brightness of the new vessel's sides. "Stick your fingers in."

She did as directed, pressed and a wide door in the side of the projectile swung open. "Bright thought. No handles to break off."

They stepped in, bending their heads to avoid the low ceiling.

"She isn't as roomy or comfortable or as heavily armored as the one I mean to build later," explained Sherman, "but this is only an experimental craft, built in a hurry, so I had to take what I could get."

"Now here, Murray, you sit here. Your job is going to be to mind the gravity beam that furnishes us our power. Every time you get the signal from me you throw this power switch. That will turn on all three switches at the stern and shoot the gravity beam out for the exhaust."

"You see, we can't expect to keep up a steady stream of explosions with this kind of a machine. We wouldn't be able to control it. We'll travel in a series of short hops through the air, soaring between hops like a glider."

"How are you going to do any soaring without wings?" asked Murray.

"We have wings. They fold into the body at the back. I've made them automatic. When the power switch is thrown the wings fold in. After the explosion they come out automatically unless we disconnect them. If we want to really go fast we'll disconnect them and go through the air like a projectile."

"Oh, I see. Will the windows stand the gaff?"

"I hope to tell you they will. I had them made of fused quartz, with an outer plating of leaded glass, just in case the Lassans try to get fresh with that light-ray of theirs."

"Now, Gloria, you sit here. You're

the best shot in the crowd and it's going to be your job to run that searchlight in the prow. As soon as you pick up anything with it Ben will throw his switch and whatever is at the end of it will get a dose of pure protons.

"We'll have to do a good deal of our aiming by turning the ship itself. I made the searchlight as flexible as I could but I couldn't get a great deal of turn to it on account of the necessity of getting the nuclei into the light beam."

"By the way," asked Murray. "Won't this pure light armor of the Lassans knock your beam for a row of ashcans?"

"I should say not! If they use it we've got 'em. That stuff has weight and the minute this beam of ours hits it it will intensify the effect. No matter how much pressure they



have on it will blow up all over the place. All set? Let's go. Throw in your switch, Murray."

Murray did as directed. There was a humming sound and the tiny beam of light leaped across the rear end of the ship and out the exhaust. Across it fell a thin powder of iron filings—the material that was to be decomposed to furnish the power.

With a roar, the *Monitor* leaped forward, throwing all of them back into their heavily padded seats, then dipped and soared as the wings came into play. The passengers glanced through the windows. Beneath them the outskirts of Philadelphia were already speeding by.

"Say," said Ben, "this is some bus. We must be making eight hundred miles an hour."

"Sure," said Sherman. "We could do over seventeen hundred as a pure projectile but we can't use that much speed and keep our maneuvering power."

CHAPTER XX

THE COMING OF THE GREEN GLOBES

“WHERE to, folks?” asked Sherman, during one of their periods of soaring, as they floated high above the hilly country to the west of the Delaware River.

“Oh, most anywhere,” said Ben. “I’d like to see you try out this new-fangled gun of yours on something though.”

“What shall we try it on—a house?”

“No, that’s too easy. We saw what it could do to things like that in the laboratory. Find a nice rock.”

“Okay, here goes. Don’t give her the gun for a minute, Murray.”

With wings extended the *Monitor* spiraled down toward the crest of the mountain. A projecting cliff stood just beneath them, sharply outlined in the rays of the morning sun.

“Now this is going to be difficult,” warned Sherman. “Throw that connecting bar, Ben. It holds the power-switch and the beam-switch together so they’re both turned on at once. Otherwise the recoil we’d get on this end of the beam would tumble us over backward. Hold it while I set the controls. We’ve got to take a jump as soon as we fire or we’ll pop right into the mess we make. Ready? All right, Gloria, go ahead with your searchlight.”

The beam of the searchlight shot out, pale in the daylight, wavered a second, then outlined the crest of the cliff.

“Shoot!” cried Sherman.

There was a terrific report—a shock—the *Monitor* leaped, quivering in every part, and as they spiraled down to see what damage they had done they beheld no cliff at all but a rounded cup at the tip of the mountain in which a mass of molten rock boiled and simmered.

“Fair enough,” said Ben. “I guess that will do for the Lassans, all right. Home, James?”

“Right,” answered Sherman. “We’ve found out all we want to know this trip.”

The homeward journey was accomplished even more swiftly than the trip northward as Sherman gained experience at the controls of the machine. As it glided slowly to earth at the airport a little group of officers was waiting to meet them.

“What in thunder have you been doing?” one of them greeted the Americans. “Your static or whatever it was you let loose burned out all the tubes in half the army radio sets in New Jersey.”

“By the nine gods of Clusium!” said Sherman. “I never thought of that. We’re reducing matter pretty much to its lowest terms and it’s all a good deal alike on that scale—vibrations that may be electricity, magnetism, light or matter.

“Of course, when we let go that shot there was enough radiation to be picked up on Mars. I’ll have to figure out a way to get around that. Those Lassans are no bums as electricians and after we’ve been at them once or twice they’ll be able to pick up our radiation whenever we’re coming and duck us.”

“There’s another thing,” said Ben. “I thought the *Monitor* vibrated a good deal when you let that shot go.”

“It did. We’ll have to get more rigidity or we’ll be shaking ourselves to pieces every time we shoot. But this, as I said, is an experimental ship. What we’ve got to do now is turn in and build a real one with heavy armor and a lot of new tricks.”

“How are you going to know what kind of armor to put on her?”

“That’s easy. Steel will keep out any kind of material projectiles they’re likely to have if it’s thick enough. It won’t keep out the light-ray but we’ll put on a thin lead plating to take care of that, just in case—though I don’t think they’re likely to try it after the one failure.

"Then inside the steel armor we'll put a vacuum chamber. That will stop anything but light and maybe cosmic radiation and I don't think they're up to that, although we'll get a little of the effect through the struts that support the outer wall of the chamber. What I would like though, is a couple of these Lissan thought-helmets. Not that you people are slow on the uptake but we'd be a lot faster if we had them and we're going to need all the speed we can get."

They were crossing the flying field as they spoke, making for headquarters, where Sherman presently laid out the design for the second *Monitor*, embodying the improvements he had mentioned. The engineer who looked it over smiled doubtfully.

"I don't think we can give this to you in less than three or four weeks," he said. "It will take a lot of time to cast that armor you want and to build the vacuum chamber. I assume your own workmen are going to make the internal fixtures."

"Correct from the word go," Sherman told him. "But you'd better have it before three weeks are up. Ben, what do you say we run over to the lab and see if we can dig up something new."

IT WAS two days later when they stood at headquarters on the flying field again. The *Monitor* had made three more trips, on one of them flying over the Lissan city without seeing anything more important than the Australian signal station perched on a nearby hill.

Meanwhile the Army of the Federated Governments had pushed out its tentacles, searching the barren waste that had been the most fruitful country in the world. East, west, south and north the report was the same—no sign of the Lissans or any other living thing.

"I wish," said Gloria, "that those lads would stick their noses out. I'd like to try the *Monitor* on them."

"You'll get all you want of that," said Ben a trifle grimly. "I'm glad they're giving us this much of a break. It lets us get things organized. Sherman is monkeying with a light-power motor now. If he catches it our troubles will be over."

"Wait a minute," called an officer at a desk as a telegraph key began tapping. "This looks like something." He translated the dots and dashes for them.

"Lissan—city—door—opening . . . It's from the signal station on that mountain right over it . . . Big—ball—coming out—will—will—What's this? The message seems to end." He depressed the key vigorously and waited. It remained silent.

"Oh boy!" said Sherman. "There she goes! They got that signal station, I'll bet a dollar to a ton of Lissan radiation."

The officer was hammering the key again. "We're sending out airplane scouts now," he said. "Too bad about the signal station but that's war!"

"Come on, gang," said Ben. "Let's get out to the flying field. Looks like we're going to be in demand."

In a car borrowed from the headquarters staff they raced out to the field where the *Monitor* stood, ready on its ramp for any emergency. Just as they arrived an airplane became visible, approaching from the north. It circled the field almost as though the pilot were afraid to land, then dipped and came to a slow and hesitating stop.

The onlookers noticed that its guy wires were sagging, its wheels uneven. It looked like a wreck of a machine which had not been flown for ten years, after it had lain in some hangar where it received no attention at all.

As they ran across the field toward it, the pilot climbed slowly out. They noticed that his face was pale and horror-struck, his limbs shaking.

"All gone," he cried to the oncoming group.

"What? Who? What's the matter?"

"Everything. Guns — tanks — planes! The big ball's got 'em. Almost got—" He collapsed in Ben's arms in a dead faint.

"Here," said Ben, handing the unconscious aviator to one of the Australian officers. "Come on, there's something doing up there. Big ball, eh? Well, we'll make a football of it. That chap looks as though he'd been through a milling machine, though. The Lassans certainly must have something good."

With a shattering crash as Murray Lee gave her all the acceleration she would take, the *Monitor* left the ramp, soared to gain altitude and headed north amid a chorus of explosions.

In less than five minutes the thickly-settled districts of northern New Jersey were flowing by beneath them.

"Wish we had some radio in this bus," remarked Ben Ruby. "We could keep in touch with what's going on."

"It would be convenient," said Sherman, "but you can't have everything. The Lassans aren't going to wait for us to work out all our problems. Look—what's that over there?"

At nearly the same level as themselves and directly over the city of Newark a huge globular object, not unlike an enormous green cantaloupe, appeared to float in the air. From its underside a thin blue beam of some kind of ray reached the ground. From the face turned diagonally away from them a paler wider beam, yellowish in color, reached down toward the buildings of the city.

Where it fell on them they collapsed in shattering ruin—roofs piled on walls, chimneys tumbled to the ground. There was no flame, no smoke, no sound—just that sinister monster moving slowly along, demolishing the city of Newark almost as though it were by an effort of thought.

"Hold tight, everybody," cried Sherman. "Going up."

THE *Monitor* slanted skyward. Through the heavy quartz of her windows they could see a battery of field guns, cleverly concealed behind some trees in the outskirts of the city, open fire. At the first bursts the monster globe swung slowly round, the pale yellow ray cutting a swath of destruction as it moved. The shells of the second burst struck all around and on it. "Oh, good shooting!" cried Gloria but even as she spoke the yellow ray bore down and the guns became silent.

"What have they got?" she shouted between the bursts of the *Monitor's* rocket motor.

"Don't know," replied Sherman, "but it's good. Ready? Here goes. Cut off, Murray."

From an altitude of 15,000 feet the *Monitor* swept down in a long curve. As she dived Gloria swung the searchlight beam toward the green globe.

"Go!" shouted Sherman and Ben threw the switch. There was a terrific explosion, the *Monitor* pitched wildly, then, under control, swung round and began to climb again. Through the thinning cloud of yellow smoke, they could see a long black scar across the globe's top with lines running out from it like the wrinkles on an old old face.

"Blast!" said Sherman. "Only nicked him. They must have something good in the line of armor on that thing. Look how it stood up. Watch it, everybody, we're going to go again, Gloria!"

Again the searchlight beam swung out and down, sought the green monster. But this time the Lassan globe acted more quickly. The yellow ray lifted, probed for them, caught them in its beam. Instantly the occupants of the *Monitor* felt a racking pain in every joint. The camera-boxes of the gravity-beam trembled in their racks. The windows, set in solid steel though they

were, shook in their frames. The whole body of the rocket-ship seemed about to fall apart.

Desperately Sherman strove with the controls—dived, dodged, then finally, with a raised hand to warn the rest, side-slipped and tumbled toward the earth, pulling out in a swinging curve with all power on—a curve that carried them a good ten miles away before the yellow ray could find them.

"Boy!" said Murray Lee, feeling of himself. "I feel as though every joint in my body were loose. What was that, anyway?"

"Infra-sound," replied Sherman. "You can't hear it but it gets you just the same. Like a violinist and a glass. He can break it if he hits the right note. I told you those babies would get something hot. They must have found a way to turn that pure light of theirs into pure sound and vibrate it on every note of the scale all at once beside a lot the scale never heard of. Well, now we know."

"And so do they," said Ben. "That bozo isn't going to hang around and take another chance on getting mashed with our gravity beam. Even if we did only tip him I'll bet we hurt him plenty."

"All I've got to say," replied Sherman, "is that I'm glad we're made of metal instead of flesh and blood. If that infra-sound ray had hit us before we'd be mashed potatoes in that field down there. No wonder the signal station went out so quick."

"Do we go back and take another whack at them?" asked Murray Lee.

"I don't like to do it with this ship," Sherman replied. "If we had the *Monitor Two* it would be easy. With that extra vacuum chamber around her, she'll take quite a lot of that infra-sound racket. Vacuum doesn't conduct sound you know, though we'd get some of it through the struts. But this one— Still I suppose we'll have to show them we mean business."

The *Monitor* turned, pointed her

lean prow back toward Newark and bore down. In their flight from the infra-sound ray the Americans had dived behind a fluffy mass of low-hanging cloud. As they emerged from it, they could see the huge green ball, far up the river, retreating at its best speed.

"Aha," Sherman said. "He doesn't like gravity beams on the coco. Well, come on, give her the gun, Murray."

Under the tremendous urge of the gravity-beam explosions at her tail, the *Monitor* shot skyward, leaving a trail of orange smoke in her wake as the beam decomposed the air where it struck it. Sherman lifted her behind the clouds, held the course for a moment, called "Ready, Gloria?" and then dropped.

LIKE a swooping hawk, the *Monitor* plunged from her hiding place. Sherman had guessed right. The green ball was not five miles ahead of them, swinging over the summits of the Catskills to reach its home. As they plunged down the yellow ray came on, stabbed quickly, once, twice, thrice—caught them for a brief second of agonizing vibration, then lost them again as Sherman twisted the *Monitor* around.

Then Gloria's beam struck the huge globule fair and square. Ben Ruby threw the switch and a terrific burst of orange flame swallowed the whole center of the Lassan monster.

Prepared though they were for the shock, the force of the explosion threw the ship out of control. It gyrated frantically, spinning up, down and sidewise as Sherman worked the stick. The Catskills reared up at them, shot past in a whirl of greenery. Then with a splash they struck the surface of the Hudson.

Fortunately, the *Monitor's* wings were extended and took up most of the shock at the cost of being shattered against her sides. Through the beam-hole at the stern the water began to flow into the interior of the ship.

"Give her the gun!" called Sherman frantically, working his useless controls. There was a report, a shock, a vivid cloud of steam. Ripping and coughing like a child that has swallowed water in haste, the *Monitor* rose from the stream, her broken wings trailing behind her.

"I don't know whether I can fly this crate or not," said Sherman, trying to make what was left of the controls work. "Shoot, Murray—if we put on enough power we won't have to soar."

There was a renewed roar of explosions from the *Monitor*. Desperately, swinging in a wide curve that carried her miles out of her way, she turned her nose southwards.

"Make Philly," cried Sherman cryptically above the sound of the explosions that were driving their craft through the air at over nine hundred miles an hour. Almost as he said it they saw the airport beneath them. The *Monitor* swerved erratically. The explosions ceased. She dived, plunged and slithered to a racking stop across the foreshore of the seaplane port, ending up with a crash against a float, and pitched all four occupants from their seats onto the floor.

"Well, that's one for you and one for me," said Sherman as he surveyed the wreckage ruefully. "We used up that green ball all right but the old *Monitor* will never pop another one. Did anyone notice whether there were any pieces left by the way?"

"I did," said Gloria. "As we came up out of the water I could see a few hunks lying around on the hill."

"Mmm," remarked Sherman, "they must be built pretty solidly. Wish I knew what was in them. That's one thing I never did get through that thought-helmet. Probably something they just figured out. You gave her all the power we had, didn't you?"

"There's something else I'd like to know," said Ben. "And that's whether they had time to warn the rest of the Lassans what they were

up against. If they did we stand a chance. The way I have these guys figured is that they're good but they have a yellow streak.

"Or maybe they're just lazy and don't like to fight unless they're sure of winning. If I'm right we'll have time to get *Monitor Two* into commission and before they come out again we'll be ready for them. If I'm wrong we might as well find a nice hole somewhere and pull it in after us."

"Yes, and on the other hand, if they did have time to warn them, they'll sit down and dope out some new trick. Though I have a hunch they won't find an answer to that gravity-beam so easily. There isn't any that I know of."

"Well, anyway," said Murray Lee, "nothing to do till tomorrow. What are you two rummies up to now?"

"Run up and push them along on *Monitor Two* if we can," replied Ben. "I think I'll round up the rest of the mechanical Americans and put you all to work on it. We can work day and night and get it done a lot quicker."

"Me," said Sherman, "I'm going to figure out some way to install radar on that new bus or bust a button. That's one thing we ought not to do without. If we'd known the position of that green lemon before we saw it we could have dived out of the clouds on it and made it the first shot before we got all racked up with that yellow rays."

CHAPTER XXI

REINFORCEMENTS

THE little group separated, going about their several tasks. Whatever the cause Ben proved to be right about the Lassan green spheres. After that one brief incursion, in which they had wrecked the greater part of Newark and most

of the artillery the Australians had established to bear on the door of the Lassan city, they seemed to have returned to their underground home, realizing that the earth-men still had weapons the equal of anything the creatures of Rigel could produce.

For a whole week there was no sign of them. Meanwhile the Federated Army dug itself in and prepared for the attack that was now believed certain. The success of the first *Monitor* had been great enough, it was decided, to warrant the construction of more than one of the second edition. General Grierson wished to turn the whole resource of the Allied armies to building an enormous number but under Ben's persuasion he consented to concentrate on five.

For, as Ben pointed out to the general, the training of flesh-and-blood men for these craft would be labor lost.

"They couldn't stand the acceleration that will be necessary, for one thing. With *Monitor Two* we expect to be able to work up swiftly to over a thousand miles an hour and the most acceleration a flesh and blood man can stand won't give us that speed quickly enough.

"Of course, we could make 'em so they worked up speed slowly but then they wouldn't be able to cut down fast enough to maneuver. And for another thing this infra-sound ray the Lassans project would kill a flesh-and-blood man the first time it hit him. What we need for this kind of war is supermen in the physical sense.

"I don't want to make any such snooty statement as that Americans are better than other people but we happen to be the only ones who have undergone this mechanical operation and we're the only people in the world who can stand the gaff. You'll just have to let us make out the best we can. In fact, it might be better for you to re-embark the army and let us fight it out all alone. The more women we have here, the

more we'll have to protect."

The general had been forced to agree to the first part of this statement but he gallantly refused to abandon the Americans though he did send away men, troops and guns which had become useless in this new brand of warfare. But he insisted on retaining a force to run the factories that supplied the Americans with their materials and on personally remaining with it.

Even as it stood there were only fourteen of the mechanical Americans remaining—enough to man three of the *Monitors*.

But one day as *Monitor II*, shining with newness, stood on her ramp having the searchlights installed, Herbert Sherman came dashing across the flying field, waving a sheet of paper.

"I've got it," he cried, "I've got it! I knew I got something from those Lassans about electricity that I hadn't known before and now I know what it is. Look!"

"Radar?" queried Ben.

"No, read it," said Sherman. "Radar's out. But this is a thousand times better."

He extended the sheet to Ben, who examined the maze of figures gravely for a moment.

"Now suppose you interpret," he said. "I can't read Chinese."

"Sap. This is the formula for the electrical device I was talking about."

"Yeh. Well, go on, spill it."

"Well, I suppose I'll have to explain so even your limited intelligence will grasp the point. In our black box, we've been breaking up the atoms of lead into positive and negative charges. We've been using the positive and then just turning the negative loose. This thing will make use of both and give us a swell new weapon all at once.

"Look—the negative charges will do for our gravity beam just as well as the positive. They will create an excess of negative electrons instead of an excess of positive protons in the object we hit and cause atomic

disintegration. It's a gravity process just the same but a different one. Now that gives us something else to do with the positives.

"You know what a Leyden jar is? One of those things you charge with electricity, then you touch the tip and bang—you get a shock. Well, this arrangement will make a super-Leyden jar of the *Monitor*. Every time she fires the gravity-beam the positive charges will be put into her hull and she'll soon be able to load up with a charge that will knock your eye out when it's let loose."

"How's that? I know the outside of the *Monitor* is covered with lead and so is the outside of a Leyden jar but what's the connection?"

"Well, it's this way—when you load up a Leyden jar the charge is not located in the plating but in the glass. Now the *Monitor* has a lot of steel, which will take up the charge just as well as glass. As soon as she fires the gravity-beam these filaments will load her up with the left-over positives till she grunts. See?"

"And since the earth is building up a lot of negative potential all the time, all you have to do is get your bird between you and the earth and then let go at him?"

"That's the idea. It'll make an enormous spark-gap and whatever is between us and the earth will get the spark. Sock them with a flash of artificial lightning. We'll use the light-beam as a conductor just as with the gravity-beam."

"Sounds good but I want to see the wheels go round. How much of a potential do you think you can build up in the *Monitor*?"

"Well, let's see. We've got two thicknesses of nine-inch steel—volts to a cubic inch—by cubic inches. Holy smoke, look how this figures out—over eleven million volts!"

"That's theory, of course. There'll be some leakage in practise and we won't have time to build up that much negative potential every time we shoot. If we only do half that

well we'll have a pretty thorough-going charge of lightning. Peterson, come over here. I want you to make some changes on this barge."

MONITOR II stood on the ramp that had once held her elder sister, her outer coating of lead glimmering dully in the morning sun. Here and there, along her shining sides were placed the windows through which her crew would watch the progress of the battle.

Her prow was occupied by the same type of searchlight the earlier *Monitor* had borne. But this time the searchlight was surrounded by a hedge of shining silver points—the discharge mechanism for the lightning is going to do us any stead of the opening running right through into the ship, was a tight bulkhead, with the connections for the gravity-beam rocket-mechanism leading through it.

As Sherman pointed out, "If this lightning is going to do us any good we've got to get above our opponent and those Lassans have built machines that made interplanetary voyages. We've got to make this boat airtight so that we can go right after them as far as Rigel if necessary."

It had been decided, in view of the other monitors that were building, to make the trial trip of the second rocket-cruiser also a training voyage, with Beeville and Yoshio replacing Murray Lee and Gloria in her crew.

They climbed in. The spectators stood back and with a thunderous rush of explosions and a cloud of yellow gas the second *Monitor* plunged into the blue.

"Where shall we go?" asked Sherman as the ship swooped over the plains of New Jersey.

"How much speed is she making?" asked Ben Ruby.

"I don't know exactly. We didn't have time to invent and install a reliable gauge. But—" he glanced at the map before him, then down

through the windows at the surrounding country. "I should say not far short of a thousand an hour. That improved box sure steps up the speed. I'm not giving her all she'll stand, even yet."

"If you've got that much speed why don't you visit Chicago?" asked Beeville. "The Australians have only pushed as far as Ohio and there may be some people there."

"Bright thought," remarked Sherman, swinging the prow of the vessel westward. "No telling what we'll find but it's worth a look anyway."

For some time there was silence in the cabin as the rocket-ship, with alternate roar and swoop, pushed along. Yoshio was the first to speak.

"Ah, gentlemen," he remarked, "I observe beneath window trace of city of beer, formerly Cincinnati."

"Sure enough," said Ben, peering down. "There doesn't seem to be much beer there now, though."

The white city of the Ohio vanished beneath them, silent and deserted, no sign of motion in its dead streets.

"You know," said Sherman, "sometimes when I see these cities and think of all the Lassans have wrecked it gives me an ache. I think I'd do almost anything to knock them out. What right did they have to come to this country or this earth anyway? We were letting them alone."

"Same right wolf obtains when hungry," said Yoshio. "Wolf is larger than rabbit—end of rabbit."

"Correct," agreed Beeville. "They were the stronger. It's a case of hit or be hit in this universe. Our only out is to give them better than they give us."

"Oh, I don't know," said Ben Ruby, "it may be a good thing for the old world at that. You never heard of all the governments of the world cooperating before as they are now did you? There are still people alive you know. Civilization

hasn't been killed off by a long shot.

"And that blue coloring that affected all the people who didn't get metalized isn't going to be permanent. The babies being born there now are normal, I hear. In a few generations the earth will be back to where it was except for us. I don't know of any way to reverse this metal evolution."

"Neither do I," said Beeville, "unless we can get another dose of the 'substance of life' as the Lassans call it—and we won't get that unless they decide to leave the earth in a hurry."

"Look," said Sherman, "there's Chicago now. But what's that? No, there—along the lake front."

Following the direction of his pointing finger they saw something moving vaguely along Lake Shore Boulevard, something that might be a car—or a man!

"Let's go down and see," offered Ben.

"Okay, chief, but we've got to pick a good landing place for this tub. I don't want to get her marooned in Chicago."

THE explosions were cut off, the wings extended, and Sherman spiraled carefully downward to the spot where they had seen the moving object. With the nicety of a magician he brought the ship to a gliding stop along the park grass. Followed by the rest Ben Ruby leaped out. The edge of the drive was a few yards away. As they emerged from the ship no one was visible but as they walked across the grass, a figure, metallic like themselves, and with a gun in one hand, stepped from behind a tree.

"Stand back!" it warned suspiciously. "Who are you and what do you want?"

"Conversation with sweet-looking gentleman," said Yoshio politely, with a bow.

"Why, we're members of the American air force," said Ben, "cooperating with the Federated

Armies against the Lassans, and we were on an exploring expedition to see if we could find any more Americans."

"Oh," said the figure, with evident relief. "All right then. Come on out, boys."

From behind other trees in the little park a group of metallic figures, all armed, rose into sight.

"My name's Ben Ruby," said Ben, extending his hand, "at present General commanding what there is of the American army."

"Mine's Salsinger. I suppose you could call me Mayor of Chicago since those birds got Lindstrom. So you're fighting the Lassans, eh? Good. We'd like to take a few pokes at them ourselves but that light-ray they have is too much for us. All we can do is pot the birds."

"Oh," said Ben, "we've got that beat and a lot of other stuff too. How many of you are there?"

"Eight including Jones, who isn't here now. Where are you from, anyway? St. Louis?"

"No, New York. Is anybody alive in St. Louis or the other western cities?"

"There was. We had one man here from St. Paul and Gresham was from St. Louis. The birds got him and carried him off to the joint the Lassans have in the Black Hills but he got away."

"Have they a headquarters in the Black Hills too? They have one in the Catskills. That's where we've been fighting them."

The explanations went on. It appeared that Chicago, St. Louis and other western cities had been overwhelmed as had New York—the same rush of light from the great comet, the same unconsciousness on every side, the same awakening and final gathering together of the few individuals who had been fortunate enough to attract the attentions of the Lassans' birds and so be sent to their cities for transformation into Robots.

Since that time the birds had

raided Chicago and the other western cities unceasingly and had reduced the original company of some thirty-odd to the eight individuals Ben had encountered. Before the birds had attacked them, however, they had managed to get a telegraph wire in operation and learn that people were alive at Los Angeles—whether mechanized or not they were uncertain but they thought not.

Once, several weeks before, a Lassan fighting-machine had passed through the city, wrecked a few buildings with the light-ray and disappeared westward as rapidly as it had come.

With some difficulty and a good deal of crowding the eight Chicagoans were got into the *Monitor II* for the return journey. They were a most welcome reinforcement and would furnish enough Americans to man all five of the extra rocket-cruisers.

"I hope," remarked Sherman, a couple of days later, "that those Lassans don't come out quite yet. We've got the ships to meet them now but the personnel isn't as well trained as I should like. Salsinger nearly smashed up one of the ships yesterday making his landing and one of the wings on another cracked up this morning when Roberts tried to turn too short. These rocket-ships are so fast you need a whole state to handle them in."

"And I," replied Ben Ruby, "hope they come out soon. As you say, we've got the ships now but they're not so slow themselves. With the building methods they have they can turn out ships faster than we can."

"All the same I'd like a few days more," Sherman countered. "In this brand of war it isn't how much you've got but *what* you've got that counts. Look at all the Australians—half a million men and the only good they are is to work in factories."

"Can't blame them for not being made of metal like us," said Ben.

"They're doing their best and we wouldn't be here but for them. Grierson is having the shops build us another ten rocket-cruisers on the chance that we pick up some reinforcements somewhere in the West."

"Good," said Sherman, "and I have another idea. I think we ought to keep at least one monitor on patrol over the Lassan city all the time. They're apt to get out and sneak one over on us. She can stay high up in the stratosphere."

"Of course, she can't radio, but she can fire a couple of shots if she sights them coming out and we can make a static detector that will register the disturbance. Then we can catch them as fast as they come out when they'll be easiest to attack."

"How about the other Lassan city out in the Black Hills?" asked Ben.

"It would be bad strategy to try to handle them both at once, wouldn't it," said Sherman, "Still, if you think so. . . ."

CHAPTER XXII

THE GREAT CONFLICT

IT WAS *Monitor VII*, manned by the Chicagoans, which had the honor of sighting the enemy. Just as the twilight of a bright May day was closing down over the radar men at the Philadelphia airport the static detector marked an unusual disturbance, then two quick shocks, which must have come from the patrol's bow beam. In quick succession, the other five, standing ready on their starting ramps, took in their crews, and roared up and away in a torrent of explosions at a thousand miles an hour.

Soaring to fifty thousand feet above the earth the squadron of rocket ships made its way north, *Monitor II* in the lead.

"Well, here we go," called Gloria from her seat behind the search-

light. "Hope they don't give us the runaround this time."

"They won't have the chance," said Ben. "That is, provided those Chicago boys have sense enough to remember their instructions and let them alone till we all get there. With six of these ships we ought to be able to rough 'em up a little bit."

At a speed of over a thousand miles an hour, thanks to the thinness of the atmosphere through which they were traveling, it was only a few minutes' hop from Philadelphia to the Catskill city of the elephant-men. Ben had hardly finished speaking before Sherman called from the control seat, "There they are!"

Far beneath, half revealed, half-hidden by the few tiny clouds of fleece that hung at the lower altitudes they could see the naked scar in the hills that marked the Lassan headquarters. Around it floated half a dozen of the huge green balls they had encountered on the last occasion.

As they swept by, another one, looking like a grape at the immense distance, trundled slowly out from the enormous door, swung to and fro for a second or two, then swam up to join those already in the sky. *Monitor VII* was to the north and above them—as she perceived the American fleet she swept down to join the formation, falling into her prearranged place.

"Do we go now?" asked Sherman.

"Not yet," said Ben. "Give them all a chance to get out. The more the merrier. I'd like to finish the job this time. We can't get in that door and if we did the rocket-ships would be no use to us in those passages—and they're the best we've got. Besides they're playing snooty too and aren't paying a bit of attention to us. I hope they intend to fight it out to a finish this time."

They turned north, giving the Lassans time to assemble their fleet. "What's the arrangement?" asked Gloria. "Do we all go for them at once?"

"No. We dive in first and the rest

follow behind, pulling up before they get in range. If anything happens to us they'll rescue us—if they can. You see we don't know what they've got any more than they know what we've got and I thought it would be a good idea to try the first attack with only one ship. In a pinch the rest can get away—if the Lassans haven't developed a lot of speed on those green eggs of theirs."

"How many now?" asked Sherman, from the controls, as the squadron swung back southward and the scarred mountain swam over the horizon again.

"Two—five—nine—eleven—oh, I can't count them all," said Gloria. "They keep changing formation so. There's a lot of them and they're coming up toward us, but slowly. They haven't got that blue beam at the base any more either—you know the one that globe we got after was riding on."

As they approached it was indeed evident that the green globes were rising slowly through the twilight in some kind of loose formation. It was too complex for the American observers to follow in the brief glimpses they were vouchsafed as they swept past at hurricane speed.

There seemed to be dozens of the Lassan globes—as though they expected to overwhelm opposition by mere force of numbers. Nearer and nearer came the rocketships, nearer and nearer loomed the sinister Lassan globes, betraying no signs of life, silent and ominous.

"Go?" called Sherman from his seat at the controls.

"Go!" said Ben.

The *Monitor II* dived. As she dived Gloria Rutherford switched on the deadly beam of the searchlight which would carry the gravity-beam against their enemies. For a moment it sought the green globes, then caught one fairly. Ben Ruby threw the switch and down the light beam leaped the terrible stream of the broken atoms like a wave of death. Leaped—and failed!

FOR as it struck the green globe, instead of the rending explosion and the succeeding collapse, there came only a bright handful of stars, a coruscating display of white fire that dashed itself around the Lassan ship like foam on some coastrock. It reeled backward, driven from its position under the tremendous shock of the sundered atoms, but remained intact.

"Well, I'm a son-of-a-gun!" declared Sherman as he put the *Monitor* into a spiral climb at nine hundred miles an hour to avoid any counter-attack. "If they haven't found a gravity screen! I didn't think it was possible. Goes to show you you never can tell, especially with the Lassans. Look out folks, here comes the gaff. I'm going to loop!"

For as he spoke the formation of green globes had opened out—swiftly by ordinary standards though slowly in comparison with the frantic speed of the American rocket-vessel. From half a dozen of them the racking yellow ray of infrasound leaped forth to seek the audacious ship that had attacked them single-handed.

All round her they stabbed the atmosphere, striking the few clouds and driving them apart in a fine spray of rain but missing the *Monitor* as she twisted and heaved at frantic speed.

Twenty miles away and high in the air they pulled up to recover themselves.

"And that," Sherman went on with his interrupted observation, "explains why they aren't using those blue beams for support any more. Of course a gravity screen that would work against our beam would work against the gravity of the earth just as well. They must have some way of varying its effect though. They aren't rising very fast and haven't got much speed."

"Probably the Lassans can't stand the acceleration," suggested Murray.

"Probably you're right. They can't have less than one Lassan in each globe. Of course, they might control them by radio with the thought-helmets and have the crews all robots but that wouldn't be a Lassan way of doing things.

"And I doubt if they'd think radio safe, even if they know about it, of which I'm not sure. We're shedding any amount of static around, and would play merry hell with most any radio. Wish I knew how they worked that gravity screen, though. I'll bet a boatload of Monitors against a thought-helmet that it's magnetic."

"Wish we had some way to signal the rest of the fleet," said Ben as they swung into their position at the head of the formation again. "I don't want them pushing in there with the gravity-beam if it isn't going to do any good."

Murray laughed. "They'll find it out soon enough. I think we've got plenty of speed to beat those infra-sound rays too. If that's as strong as they come we've got 'em licked."

"Don't crow yet, chum," said Gloria. "You don't know what those babies have up their sleeves—excuse me, their trunks."

As the American fleet formed for a mass attack the Lassan globes had been rising and now they were a bare five thousand feet below the rocket-cruisers, swinging along at a height of 25,000 feet above the earth in the last rays of the setting sun. As the green globes rose they took their places in a formation like an enormous crescent, the ends of which were extended as each new globe came up to join it.

"Looks like they want to get us in the middle and pop us from all directions at once," observed Sherman. "Well, here goes. Pick the end of the line—that's our best chance. How's your potential, Gloria?"

"Okay, chief," she answered. "Lightning this time?"

He nodded. The rockets of the *Monitor II* roared. Its prow dipped forward and at an incredible speed

it swept down on the line of Lassan warships, followed by the rest of the American fleet. But it was no surprise this time. As the monitors plunged in, from every green globe that could bring them to bear, the long yellow rays shot forth.

Right through them the *Monitor II* plunged. The grate of it, even through their double coating of armor and the vacuum chambers, set their teeth on edge. Then the rocketship was pointing directly down at one of the Lassans and Gloria snapped the key that released the artificial lightning.

A jagged beam of flame, intenser than the hottest furnace, leaped through the air, struck the green globe and sought the earth in a thousand tiny rivulets of light. For just a second the globe seemed unharmed. Then slowly, and almost majestically, it began to dissolve in mid-air, spouting flames at every pore. Fully ten miles down and beyond, the *Monitor* turned again, and not till then did the sound of the explosion reach them, a terrific rending thunder-clap.

"See that?" cried Sherman. "That formation of theirs isn't so dumb. They've got it all ranged out. None of our ships can get at them without coming through at least one of those yellow rays and if we stay in them too long—blooie!"

They peered through the windows at the formation. Off to one side, they could make out the forms of two more rocket-ships, outlined against the sky. Behind and above them, pursued by the searching yellow beams, came the rest.

As they turned, they saw the gravity-beam shoot from one of the American ships, crumple uselessly against a green globe. Then they plunged in, again, firing the gravity beam earthward to work up the potential for another lightning discharge.

The hills below rocked and roared to the repeated shock. Trees fell in crashing ruin as lightning-bolt or

infra-sound shivered them to bits. Great scars of burned earth and molten rock marked the spots where the gravity-beam struck the ground.

All round was a maze of yellow rays, lightning flashes and green globes that reeled, rose, fell, sometimes blowing up, sometimes giving ground, but always fighting back sternly and vigorously and always rising through the clear spring evening.

MURRAY LEE, at the rear of the ship, was the only one to see an American rocket-ship, caught and held for a few fatal moments by two yellow rays, slowly divest itself of its outer armor, then of its inner, go whirling to the earth, dissolved into its ultimate fragments by those irresistible pennons of sound.

Gloria Rutherford at the prow was the only one to see another caught bow-on in a yellow ray, reply by firing its gravity-beam right down the ray and into the green globe through the port from which the ray had issued. The ray went out—a spreading spot of flame appeared at the port and the great green globe crumpled into a little ball of flame before her eyes. But such events as these were the merest flashes in the close-locked combat.

For the most part they had time to do nothing but handle the controls, throw switches to and fro, shoot forth gravity-beam and lightning-flash in endless alternation at the Lassan ships of which there always appeared to be one more right before them as Sherman twisted and turned the *Monitor* with a skill that was almost uncanny.

Suddenly he pulled out. The four looked round. They were miles high. Below, half hidden in the dusk, were the red and brown roofs of a city. Far away on the horizon the battle still roared, a rolling cloud of smoke now, shot with the vivid fires of the American lightning flashes. The wings of their ship were spread. They were soaring gently earth-

ward without the application of the rocket power.

"Had to get away for a minute," Sherman explained. "We were heating up from the speed. My word, but we're high up—at least forty-five thousand feet!"

"Yes, and getting higher," Ben pointed out. "Those green globes must be headed for the moon."

"I wouldn't be a bit surprised but what you're right," replied Sherman. "I'll bet an oil-ball against the whole Lassan city that they think we can't navigate space and they're trying to get above us and then hang around and pop us when we have to land. Well, come on gang, let's get back."

He shot the wings in again, worked the controls and they headed back toward the conflict.

It was less of a turmoil now, more of an ordered swing, charge, pass and charge again against the diminishing number of Lassan globes. Of the American rocket-ships Gloria could now count but two beside their own. One she had seen break up. Whether the others, badly damaged, had hauled out for repairs, or whether, riven by the deadly yellow ray, they had gone crashing to the earth, there was no way of knowing.

But the Lassans were not escaping unharmed. There were hardly a third as many as at the beginning and even as they approached another one disappeared in the vivid flash of the rocket's lightnings. Still the rest rose steadily, going straight up as though they indeed hoped to escape their tormentors by rising to the moon.

They dived in. Gloria pressed the lightning key and another Lassan globe blew up. Then they were climbing again. Beneath them the night had come. The earth was a dark mass, far down, and from that enormous distance looked slightly dished out at the edges.

But though the earth was dark at that ultimate height of the atmosphere the sun had not yet set. Still

the strange fight went on, higher and higher. The roar of the exhaust explosions died away behind them and Murray looked questioningly at Sherman.

"Out this far there isn't much air," he said. "Takes air to conduct sound. Wonder what they're up to anyway. All right, Gloria."

He dived at another Lassan and she pressed the lightning ray. But this time there was no flash, no flaming Lassan ship falling in ruins to the ground.

"Who'd have thought it!" said Sherman, as he swung the *Monitor* round after the charge. "Of course—we're up so high that we've made a spark gap that even lightning won't jump. But I don't get their idea. Those sound rays won't be any good out here either."

CHAPTER XXIII

INTO THE DEPTHS

THE *Monitor* turned again, speeding back toward the remaining Lassan ships. With a shock of surprise Gloria noticed that there were only two. Down below them one of the last three American rocket-cruisers had spread her wings and was gliding gently toward the earth.

Like the *Monitor's*, her crew had evidently found the lightning flash worthless at the enormous altitude and was abandoning the battle till conditions became more favorable. The other rocket remained faithful, turned as they turned and charged up with them toward the last of the Lassans.

It was a weird scene. They had climbed so far that the earth was now perceptibly round beneath them; a vague line marked the westward progress of the sunset and beyond it the sun, an immense yellow ball, set with a crown of vividly red flames, hung in the inky-

black heavens.

On the opposite side the stars, more brilliant and greater in number than any ever before viewed by the eye of man, made the sky a carpet of light across which the green globes moved like shadows, their undersides illumined by the sun.

As the *Monitor* approached the nearest globe seemed to be turning on its axis. Suddenly, out of the side that faced them, came the quick, stabbing beam of the light-ray, like the flicker of a sword. It struck the *Monitor* full on the prow.

There was a burning rain of sparks past the windows. The rocket-ship leaped and quivered and those within felt, rather than saw something give. Then, with a tremendous explosion, all the more horrible because utterly without sound, the great globe that had thrown the ray, burst into fragments.

At the same moment the *Monitor* began to fall. Down, down, down went the rocket-cruiser with the round ball of the earth rising to meet them at incredible speed. The sun went out. They were swallowed in a purple twilight as they plunged.

The earth changed from a ball to a dish, from a dish to a plane, from a plane to a dark mass without form. In the mass vague lights and glimmerings of water came out and still their course was unchecked, still Sherman fought frantically with the useless controls.

Desperately Murray pressed the firing keys of the stern-rockets. Unchecked she drove on, almost straight down, plunging to certain destruction. The earth loomed nearer, nearer, the end seemed inevitable—.

Then Gloria saved them. In a moment of inspiration she threw on the searchlight and the automatic connector fired the gravity-beam. There was a shattering report. The course of the *Monitor* was halted and, bruised and broken, she tumbled over and over to the ground, safe but ruined.

"Suffering Lassans!" said Ben

Ruby as they picked themselves out of the wreckage, "but that was a jar. What hit us anyway?"

Sherman pointed to Gloria, breathlessly. "Give the little girl a hand," he ejaculated. "She sure pulled us out of the fire that time."

"I'll say she did!" said Murray. "But what happened? I thought that light-ray of theirs wouldn't work on these ships."

"It won't—in air," said Sherman ruefully, surveying the wreck of the *Monitor*. "But the air blankets down the effect a lot. Out there we got the whole dose. Even then it shouldn't have hurt us so seriously but I expect a lot of our lead sheathing got jarred loose when we went through those yellow rays and when they let that light-ray go she leaked all over the place. Wonder what made that Lassan ship blow up like that though? I thought she sure had us."

"Oh!" said Ben. "I think maybe I did that. When the light-ray came on it occurred to me that the gravity-beam might go down their beam of light just as fast as it would down ours and they must have a porthole or something through their gravity-screen or they couldn't let the ray out. So I just let them have it."

"Boy, you sure saved our lives that time! About one second more of that stuff and we'd have cracked up right there. Look at the front of our bus. The outer plating is all caved in and the inner is starting to go."

"She is pretty well used up, isn't she? What gets me though is that there's one more of those things loose."

"Look!" cried Gloria suddenly, pointing upward.

FAR in the zenith above them they saw a point of light—a point that grew and spread and became definite as a great star. Then it became a shooting star, plunging earthward, and so great was its speed that even as they watched they

could make out a green fragment, flame-warped in its midst.

"The last one!" said Sherman. "Praise Allah for that. Wonder how they got her?"

"Wonder what we do next," remarked Murray, practically.

They looked about them. They were on a hillside in a little clearing in a high, narrow valley. On every side were woods, dark and impenetrable. Just below they could hear the purl of a brook and the trees about them were bare with the dark bareness of spring, a few fugitive buds being the only announcement that the season of growing was at hand. No landmarks, no roads were visible and the sky was darkening fast.

"The question," said Gloria, "is not where do we go but where are we going from."

"It might be most anywhere," remarked Murray. "Adirondacks, Catskills, even Laurentians. I don't think we got far enough west for it to be the Blue Ridge or the Appalachians but there's no way of telling."

"Well," Gloria offered, "I've been in a lot of mountains in my day, but I never saw any where following a stream didn't take you somewhere sooner or later. I vote we trail along with that brook there and see what happens."

"Bright thought," commented Ben. "Let's see what we can dig out of the wreck in the way of weapons."

"What for? There aren't any animals and they couldn't hurt us if there were. If we meet any of the Lassans any weapon we got out of that mess wouldn't be much use. Wish we had a flashlight though."

Treading carefully but with a good deal of noise and confusion, they began to crash their way through the underbrush along the bank of the stream. At the foot of the valley it dived over a diminutive waterfall and then tumbled into another similar brook. Along the combined streams ran a road—a dirt road originally, now long untraveled,

muddy and bad but still a road.

An hour's walking brought them around the foot of another mountain and into a valley where the road divided before a projecting buttress of rock. A teetering sign-post stood at the fork. With some trouble, and after getting himself immersed to the knees in the ditch, Murray managed to reach it and straining his eyes in the starlight, made out what it said.

THIS WAY TO HAMILTON'S CHICKEN DINNERS—1 MILE it read. With a snort of disgust he hurled the deceitful guidepost into the ditch and joined the others.

"Toss a coin," someone suggested. No coins. A knife was flipped up instead. It fell heads and in accordance with its decision they took the road to the right. It led them along beside the stream for a while, then parted company with it and began to climb and they soon found themselves at the crest of the hill.

The night had become darker and darker, clouding over. But for the road they would have been completely lost. Finally, after skirting the hillcrest for a distance, the road dipped abruptly and as it did so, they passed out of the forest into a region cleared but not cultivated, with numerous close-cut stumps coming right to the roadside.

"But for the fact that it's a long way away," remarked Sherman, "I would say that this was the district around the Lissan headquarters."

"What makes you think it's a long way away?" asked Gloria. "Do you know where we are? Neither do I."

"By the nine gods of Clusium, I believe that's it at that!" said Sherman suddenly as the road turned past a place where a long scar of earth ran up the hillside, torn and blackened. "See—that looks exactly like the result of one of our gravity-beam shots! And there— isn't that the door?"

They were on the hillside now, directly above the place he had indicated. From above and in the

darkness it appeared as a cliff, breaking down rapidly to the valley. Sherman led them to one side, straight down the hill, and in another moment they were at its base. The great door through which the green balls had poured out that evening stood before them, a mighty arch reaching up into the dimness—and it was open.

"Looks like the boys haven't come home to supper yet," said Gloria in an awed whisper, contemplating the gigantic arch and the dark passage into which it led.

"Yes, and a lot of them aren't coming, either," replied Murray in a similar tone. "But what do we do—make a break for it or poke in and see if anybody's home?"

"Listen, you three," said Sherman. "You run along and build some more monitors and go get whatever comes out of here. Me, I'm going to have a whirl at this door. The swellest girl in the world is in there or was—and I'm going to find her."

"Nothing doing, old man," said Ben. "If you go in we go too—except Gloria."

"What's the matter with me?" she demanded. "I'm made of the same kind of machinery you are, aren't I? And I'm good enough to run your foolish fighting-machine. Don't be a dope." And she stepped forward.

THE blue-domed hall that gave directly on the outer air had disappeared since Sherman and Marta Lami had raced out of it on that night that now seemed so long ago. In its place was an enormous tunnel, lined apparently with some metal, for its sides were smooth and shimmering.

The portion they entered was lightless but it curved as it ran down and around the curve they could see the faint reflection of a light somewhere further along the passage. Their feet echoed oddly in the enormous silence of the place. There seemed nothing alive or dead within.

"Boy!" whispered Murray to Gloria. "If one of those green globes comes back now it will squash us flatter than a stage bankroll. This is the craziest thing we ever did."

"Right," she said, "but what the heck? I came along for the ride. Look, what's that?"

Before them, around the bend of the passage, they could see another door from which the light which glittered along the tunnel was streaming. In the opening stood a man, or what seemed to be a man, facing, fortunately, inwards.

After a moment's cautious peering, Sherman pronounced him one of the apeman slaves. He wore a thought-helmet and had some kind of a weapon in his hand. The four held a cautiously whispered conference.

"Listen," said Sherman, "we've got to jump that baby before he does anything. I think he's got one of those small light-guns. Didn't know they trusted them to the slaves but I suppose so many of the Lassans got shot up that they had to do it. Now, who's got a knife?"

A search of pockets revealed that Murray Lee had the only one in the company.

"Never mind," said Sherman. "One is enough. Now we three will sneak up on him. The main thing is not to let him see us. If he makes a move jump him quick. Remember, there's a Lassan at the other end of the line and the Lassan is getting everything he thinks.

"He doesn't think very fast but don't take chances. If he sees us you hop in, Murray, and cut the wire that leads out of his helmet and short-circuit it. They may have it fixed so that it won't short-circuit by now but I don't think so.

"If he doesn't see us before we jump him clap your hands over his eyes, Ben, and I'll try to get the helmet off him and pass out some information to the Lassan at the other end that will keep him quiet. But the main thing is to get that

gun first. Everybody understand?"

Three heads nodded in unison.

"All right. Come on."

They crept up the passage together avoiding touching hands lest the ring of metal should warn the sentry. As they approached they could see the room he looked out on was one of the familiar blue-domed halls. The passage ended sharply some six feet above its floor.

"Taking no chances on more escapes," thought Sherman.

The hall was of enormous size. There were machines in one corner of the floor. In another stood one of the green globes, half finished, with spidery trellises of red metal outlining what would be the surface of the sphere. Around it helmeted mechanical men came and went busily. The rest of the hall, for all its vast extent, was completely empty. At the far end was a row of doors—high on the far side an opening that looked like a door but had no obvious purpose.

This much they saw. Then the sentry stirred as though to turn and with a quick patter of feet they were upon him. Before he had time to turn Ben Ruby launched himself in a perfect football tackle for his legs, bringing the ape-man down with a crash.

As he fell Sherman snatched at the helmet and Gloria at the light-gun, which had dropped from his fingers, while Murray pinioned the struggling creature's arms. In a moment Sherman found the finger-holes in the helmet, pressed, and it came loose in his hands. The apeman ceased to struggle.

"Let him up now, folks," said Sherman, "give him a swift kick and point him toward the door. He won't come back." He rapidly adjusted the thought-helmet to his own head.

The Lassan at the other end was evidently disturbed. He had received the sound of the crash from the apeman's brain and was asking querulously what it meant.

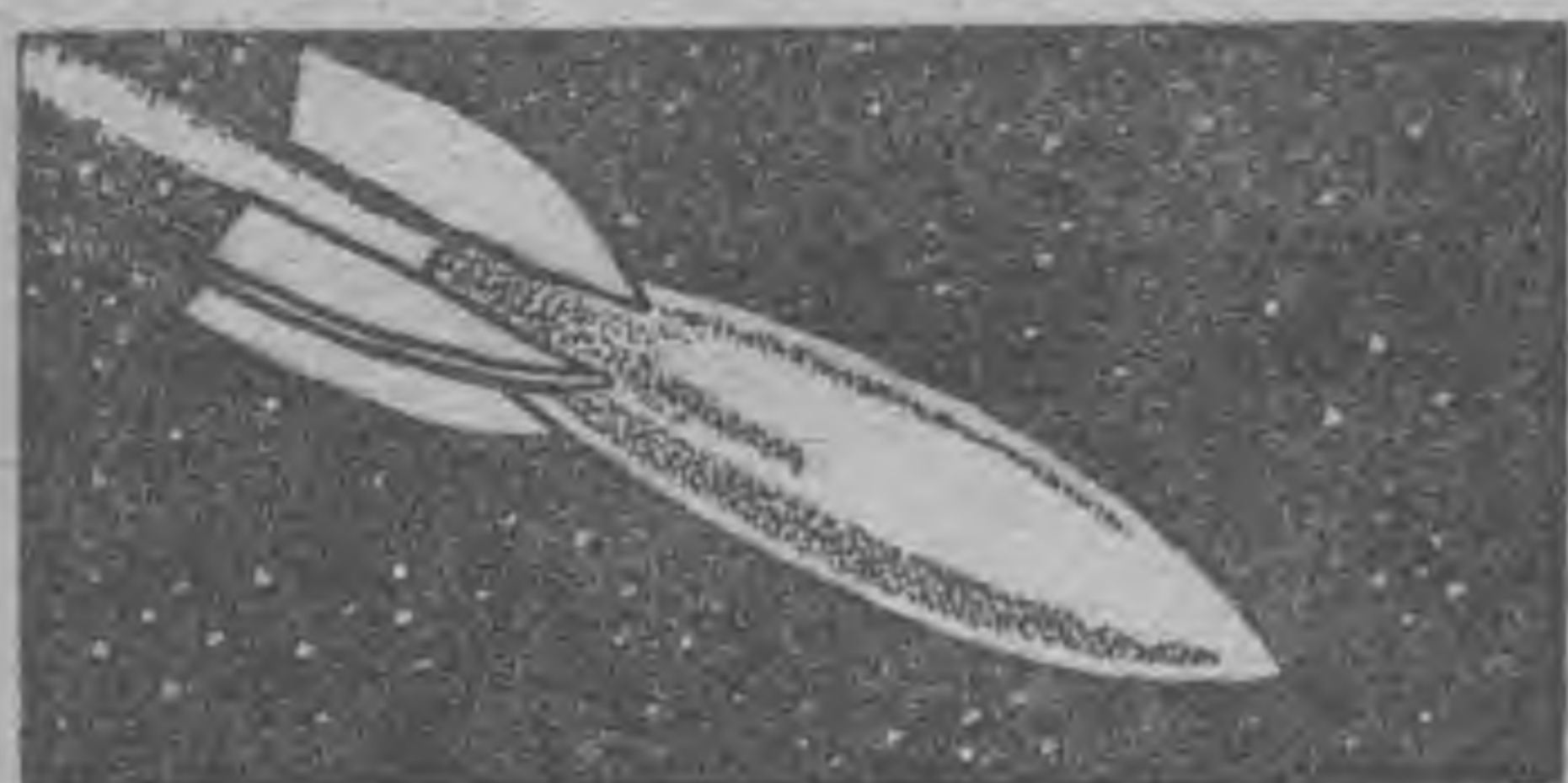
"What has happened?" the

thought demanded insistently. "What is it that struck you? Have the fighting machines returned? Show a picture of what you see. Are the slaves escaping?"

"Everything's all right," Sherman sent back. "Something broke loose down below and I stumbled trying to look at it." He closed his eyes, forming a mental picture of the hall with everything in order, then one of the passage, and reached up and detached the helmet, motioning to Murray for the knife. An instant's sawing and the device short-circuited with a fizzing of blue sparks.

"That will give that one a headache for a while," he remarked. "We'll have to hurry though. When he comes to he'll investigate and then there'll be trouble."

"What's that?" asked Gloria, pointing across the hall at the aperture high up in the wall. A gleaming beak had been thrust out and



the bright, intelligent eye of one of the dodo-birds was regarding them malevolently from the opening.

"Shoot—quick!" said Sherman. "For heaven's sake! They're telepathic. They'll have every Lassan in the place after us."

GLORIA fumbled a second with the gun, located the finger hole, sent a spurt of light flying across the room. It missed the head but found its mark somewhere in the body of the bird, for there was a squawk and the head disappeared. Sherman vaulted down the six-foot drop, landing with a bang.

"Come on!" he cried. "Short-circuit every wire you can find. Tear them loose if you can't cut them any other way. Then make for the mid-

dle door at the back."

They ran across the hall toward the work benches. It seemed enormous, like a race in a dream, in which one seems to make no progress whatever. But the workers did not appear to notice them. Driven by the thoughts of the controlling Lassans, they were incapable of attending to anything else unless it was forced on their attention.

As they approached the benches, however, one flat-faced ape-man almost ran into them. His face took on an expression of puzzled inquiry and at the same moment a figure whose carriage plainly showed it to be human stepped down toward them from the half-completed green globe. Gloria paused, leveled her light-gun at the ape-man and his face vanished in a spray of fire. The human advanced slowly as though struggling against some force that was too strong for him. Sherman reached him first, wrenched the helmet from his head and dropping it on the floor stamped on it till the fine mechanism was irretrievably ruined. The mechanical human fell to his knees.

"Who are you?" he asked. "God?"

"We're all right," said Murray.

Sherman said, "Which way to the living cages? Do you know Marta Lami?"

The man shook his head like one recovering from a dream. "I don't know," he said "They had the helmets on me for twenty periods. I don't know nothing. We came through that door. In the little automobiles." He indicated a door behind some of the machines.

Speed was urgent but Sherman paused to instruct them briefly. "There'll be another sentry at the door. Pop him first, Gloria. Murray, take your knife. Ben, get anything you can and cut all the wires on those birds around here. There are some more wires leading out of the machines. Be sure to get them too. You might let loose something important. We'll try to get you another gun."

CHAPTER XXIV

THE END OF IT ALL

IMPASSIVELY, oblivious of the invasion about them, the workers kept on at their machines like ants when their nest is broken open. Sherman and Gloria dodged around one of them, avoiding the direct line of sight of the robot who worked at it and walked rapidly toward the door giving on the cartracks. The man on duty had no weapon but paid them no attention, being occupied in watching a car just sliding in to the station.

"It's a shame," began Gloria.

"Shoot!" insisted Sherman and the light-ray struck him in the back of the neck, fusing head and neck to a single mass. As he sank to the floor he turned partly over.

"Good heavens, it's Stevens!" said Gloria, "the man who organized the rebellion against Ben Ruby in New York and brought the dodos down on us."

"Never mind—hurry," her companion urged in a fever of activity. The doors of the car were opening and half a dozen mechanical men stepped out, most with the foolish visages and shambling steps of the ape-men—but two had the upright walk proclaimed them human.

"Listen, everybody," called Sherman, quickly. "We're from outside. We're trying to bust up this place. Get back in the car, quick, and help us."

Suiting the action to the word he leaped for the first compartment, reached it just as it was closing and wedged himself inside.

The car had a considerable run to make. In the dimly-lit compartment Sherman was conscious of turns—right, left, right again—and of a steady descent. He wondered vaguely whether he had taken the right method—whether the cage rooms

lay near one another or were widely separated.

At all events the diversion in the hall of the green globes would hold the attention of the Lassans for some time. The short-circuiting of so many lines would hamper their methods of dealing with the emergency.

The car came to a stop. Sherman heard a door or two open but his own did not budge and he had no needle to stir it. He must wait, hoping that Gloria had not been isolated from him. She had the ray-gun at all events and would not be helpless. Then the door opened again.

He was released into a cage that seemed already occupied, and one look told him that his companion was an ape-man.

"Gloria!" he called.

"Right here," came the cheerful answer from two cages down. "This is a swell thing you got me into. How do we get out of here?"

"Have you got a pin or needle of any kind?" he asked.

"Why—yes. Turn your back." She did something mysterious among her feminine garments and held up an open safety-pin for him to see across the intervening cage.

"Stick your arm through the bars and see if you can toss it down the track. If I don't get it you'll have to blast your way out with the light-gun but I don't like to do that. Don't know how many shots it holds and we need them all."

She swung with that underarm motion which is the nearest any woman can achieve to a throw. The pin struck the gleaming car-rail, skidded, turned, came to rest before Sherman's cage. He reached for it but the ape-man in the cage, who had been watching with interested eyes, was quicker. Fending Sherman off with one huge paw he reached one of his feet through the bars for the object and held it up before his eyes admiringly.

Sherman grabbed but this only fixed the ape-man in his evident

opinion that the object he held was of value. He gripped it all the tighter, turned an amiable face toward Sherman and gibbered. Losing patience at this unfortunate contretemps when time was so precious the aviator lifted an iron foot and kicked him, vigorously and with purpose, in the place where kicks do the most good.

The ape-man pitched forward, dropping the fascinating pin, then rose and came toward Sherman, his expression clearly indicating his intention of tearing the American limb from limb. The cage was narrow, the ape-man the bigger of the two. Sherman thought hard and fast. The oilball!

He leaped for the lectern, snatched it open, seized the ape-man's oilball and held it aloft as though to throw it out into the corridor. With a wail of anguish the simian clutched at the precious object. Sherman squeezed it enough to let a little stream run forth, holding it just out of his reach and, as he stabbed for it again, tossed it back into a corner of the cell. The ape-man leaped upon it covetously and Sherman bent over the bars, fumbling in his nervous haste to unlock them.

Luckily the safety-pin fitted. With a subdued click the bars swung inward and he was out in the corridor. Another moment and Gloria was free also.

"Any more people in here?" Sherman called. Three voices answered and he hurried from cage to cage, setting them free as the warning blue lights that prohibited shouting began to flicker around the roof.

"Come on," he called. "We must get out of here quick!"

They hesitated a moment between the two doors, chose that at the upper end. As they raced through it they heard a panel clash somewhere. The Lassans were investigating.

They were in one of the passages through which the cars ran, with alternate bars of light and dark

across it marking the termination of side-passages.

"Look!" said Gloria. Into the cage-room they had just quitted a car was coming, its featureless front gliding noiselessly along the track.

"In here," said Sherman, pulling the others after him down the nearest lighted passage. Followed by the other four Sherman moved steadily along to the right, where the passage ended at a door.

"What now?" said someone.

"In," decided Gloria. "Likely to be a cage-room as not."

Sherman searched for the inevitable finger-holes, found them and pressed. The door swung back on—

A LASSAN reclining at ease on one of the curious twisted benches beside which stood a tall jar of the same yellow-flecked green material they had seen the others devouring. The room was blue-domed but very small and its walls were covered with soft green hangings in pendulous drops.

A thought-helmet was on the elephant-man's head. Its other end was worn by one of the mechanical people, whose back was to the door as they entered and who appeared to be working some kind of machine that punched little holes of varying shape in a strip of bright metal.

As the five Americans pressed into the room the Lassan rose and reached for his ray-gun. Gloria pushed the one she held into his face and he relaxed with a little squeal of terror while Sherman reached into his pouch and secured the weapon. As he did so the Lassan reached up and snapped loose the thought-helmet; the metal figure turned and gazed at them.

"Marta!"

"The boy friend!"

The Lassan was very old. His skin was almost white and seamed with sets of diminutive wrinkles. As he regarded the two mechanical people locked in each other's embrace an expression of puzzlement

and distaste came over his features, giving place to one of cool and lofty dignity as he perceived that Gloria did not mean to kill him on the spot. Lifting his trunk he motioned imperiously toward the thought-helmet, which Marta had cast aside, then set the other end of it on his own head.

To the invading Americans, crowded into the little room, it seemed for a moment as though they had somehow burst into a temple. Sherman's face became grave and, following the Lassan's direction, he picked up the helmet and fitted it on his head. The thought that came through it gave a feeling of dignity and power such as he had never experienced before—almost as though it were some god talking.

"By what right," it demanded, "do you invade the room of scientific composition? Why are you not in your cages? You know you will receive the punishment of the yellow lights in the greater degree for this unauthorized invasion. Save yourself further punishment now by retiring quietly. You can take my life, it is true, but I am old and my life is of no value. Think not that I am the only Lassan in the universe."

"Sorry," Sherman gave him back, "but this is a rebellion. You are not familiar with the history of this planet or you would know that Americans can't be anybody's slaves. Let us go in peace and we will let you return to your own planet."

"Let us go!" came the Lassan's answer. "Your obstinate presumption surprises me. Do you think that the Lassans of Rigel, the highest race in the universe, will let go what they have once grasped?"

"You will or we'll jolly well make you," replied the American. "Do you think your silly green globes are going to do you any good? The last one fell beside us tonight."

Sherman could sense the sudden wave of panic in the Lassan's thought at this unexpected answer. He had evidently assumed that they

were from the underground labor battalions and were not familiar with events outside. But he rallied nobly.

"And do you imagine, foolish creature of a lower race, that the green globes are our last resource? Even now I have perfected a device that will wipe your miserable people from the planet. But if it did not, rather would we Lassans perish in the flames of a ruined world than abandon a task once undertaken. We who can mold the plastic flesh to enduring metal and produce machines that have brains. We who can control the great substance that underlies all life and matter."

"Well, here's one task you're going to abandon," Sherman thought back. "We, who can call lightning from the skies, are going to give you a terrible sock on the—trunk if you don't. If you doubt it try and find how many Lassans live after today's battle. Go on back where you came from. You're not wanted in this world."

"You know or should know the law of evolution," replied the Lassan. "The weaker and less intelligent must ever give way before the stronger. By the divine right of—" his flow of thought stopped suddenly, changed to a wild tumult of panic. Sherman looked up. Round the rim of the blue dome, where it stood above the hangings, a string of lights was winking oddly, in a strange uneven rhythm.

"God of the Lassans, deliver us!" the thought that reached his own was saying. "The tanks are broken! The light is loose!" Then suddenly his mind was closed and when it opened again it had taken on a new calmness and dignity and a certain godlike strength.

"I do not know how or where," it told Sherman, "but an accident has happened. Perhaps an accident produced by your strange and active race. The connections have broken. The tanks of the substance of life in the bowels of this mountain have

broken and the whole is set free. It is hard to see the labor of centuries thus destroyed—to see you, creatures of a lower race, inherit a world so divinely adapted to the rule of intelligence.

"For in this accident the whole of our race must perish if you have told the truth about the destruction of our green globes. We called in all the Lassans from your world for the work of the destruction of your armies.

"Yes, you told the truth. Your mind is open—I can see it. We are lost—there is no hope remaining. It means destruction or the metal metamorphosis for every living Lassan and there will be none to endow them with the life in metal we have given you.

"Perhaps it was our own fault. Your curious race, for all its defects, has certain qualities of intelligence, above all that strange quality of activity and what you call courage. If we could have summoned up the same activity—if we had possessed the same courage to attack against odds—this would not have happened.

"It is our failure that we have depended too much on naked intellect, learned to do too many things through the hands of our servants. Had Lassans been at the controls of our fighting ships, instead of the automatons we used, you would never have conquered them so easily.

"Be that as it may. We have lost and you have won. I can show myself more generous than you would have been and thus can gain a victory over you. If you would escape follow the car-track straight on to where it forks, then take the left-hand turning.

"If you would be restored to your former and imperfect and repulsive form—though I cannot conceive why you should, being permanently fixed in beautiful and immortal metal—do not run away but await the coming of the substance of life in the outer hall or passage. Be careful not

to approach it too closely or to touch it, so that you may receive the emanation only.

"It is this emanation, surrounding our space ship that produced your present form, which we changed to machinery by our surgery. It so acts on the metal of which you are composed that it will reverse the case. As for me I am old and tired. Already the walls of this place tremble to the coming of my doom. Leave me before I regret what I have told you."

HE reached with his trunk and disconnected the thought-helmet. Standing up, with a certain high dignity, he pointed to the door.

Relieved of the helmet Sherman could hear a confused roaring like that on the day when Marta Lami and he had short-circuited the mining machine.

"Come on," he called to the rest, dropping the helmet. "Hell's let loose. We've got to hurry."

Outside the roaring was perceptibly louder and seemed to be approaching. As they leaped down to the track a faint glow was borne to them redly along the rail. The apemen in the cage-room they had escaped from were howling and beating the bars of their cages, with no blue lights to forbid them.

The track was slippery—Marta Lami and the three they had released from the cage room, unshod. Sherman gripped her by the hand. "Hurry, hurry!" he panted, pulling her along.

They passed another passage, down which a door stood open. The soft light that normally illuminated the place was flickering wildly. They caught a glimpse of three or four Lassans within, stirring about, rushing from place to place, trying this connection and that. The dull sound behind them increased. The track grew steeper.

"What about the rest?" gasped Gloria, running by his side.

"Don't know," he answered.

"They did something. The whole place is coming down."

As they rounded a corner the track forked before them. Remembering the Lissan's parting instructions, Sherman led them to the left, passed another passage mouth and they found themselves in a small blue-domed hall, empty save for a single car that stood on the track.

There was just room to squeeze past it where the passage began again at the other end. And as they made it the roaring sound changed to a series of explosions, sharp and clear. The ground trembled, seemed to tilt. The car slid backward into the passage they had just vacated.

Ten feet, twenty-five feet more—and they were on the platform leading to the hall of the green globes. Sherman swung himself up, offered a hand to Marta. In a moment the others were beside them and they were darting for the door. The ground was trembling again, shock after shock. Something fell with a crash as they raced across the platform and into the hall.

Within all was confused darkness and a babble of sound. A dodo screamed somewhere. An ape-man ran past them, gibbering, mad with fright, and dived to the track. Sherman ran across the hall, followed by Marta and the three he had released. Gloria halted.

"Murray!" she cried, "*Murray!*" and then lifted the light-gun and sent a pencil of fire screeching to the roof. There was an answering shock as something tumbled from the ceiling.

"*Murray!*" she called again, at the top of her voice. Behind them, through the platform, something fell with a crash and a long red flame licked through the door, throwing tall shadows and weird lights across the bedlam within.

"Here!" came a voice and Gloria turned to see Murray and Ben running toward her.

"Come on," she said, "hurry. The works is busted."

They made the doorway just as Sherman was pulling Marta up the six-foot step. Ben and Murray lifted Gloria in their arms, tossed her up. The red flame in the background had given place to a white one and a boiling white mass of something was sending a long tongue creeping across the floor.

Willing arms snatched at those of Ben and Murray, pulling them upward to safety. They turned to run down the tunnel.

"No!" cried Sherman. "*Stick!* It's all right. The old bloke told me so."

There was another explosion and a great white cloud rolled toward them above the liquid tide. Then they lapsed into unconsciousness.

* * * * *

Murray Lee yawned and sat up.

The others lay around him in curious piled attitudes as though they had dropped off to sleep in the midst of something. He noted with a shock of surprise that Ben Ruby's face, turned in his direction, was not metal, but good honest flesh and blood. He gazed at his own hands—flesh and blood likewise. He looked around.

The hall of the blue dome had vanished. A tangled mass of rock cemented in some grey material, was before them, obscure in the darkness. At the other end was the passage, its ceiling fallen here and there, its sides caved in. But a stream of light showed that an opening still led to the outside.

He bent over and shook Gloria. She came to with a start, looked about her, said with an air of surprise, "Oh, have I been asleep? Why, what's happened to you Murray? You need a shave." Then she felt of her own face and found it smooth again.

"For Heaven's sake!" she ejaculated.

The sound brought the rest bolt upright. Sherman looked round at the others, then at the passage, smiled with satisfaction.

"That old Lissan," he remarked, "told me the metal evolution would reverse if we got the emanation without letting the stuff touch us. Well, he was a sport."

"Yes but—" said Marta Lami, standing up and feeling of herself. "Look what they did to us. My toes are flexible and my figure bulges in such queer places. I'll never be able to dance again. Oh, well, I suppose

it doesn't matter—I'll be marrying my chum here anyway." She took Sherman's hand and he blushed with embarrassment.

"Good idea," said Murray Lee and looked hard at Gloria.

She nodded and turned her head.

"Ho, hum," said Ben Ruby. "The dictator of New York seems to be *de trop*. How does one get out of here?"



From a Scientist's Notebook

WORMS which inhabit glaciers—generally known as ice-worms—have long been considered in the same class with the chimera and the dragon. But now comes Dr. N. E. Odell of the University of British Columbia to state that ice-worms are a proven reality—that there are at least 60 species of them—and that they live on the algae in pink-snow areas of glaciers. They are $\frac{3}{4}$ th of an inch long and black in color.

OVER fifteen hundred great galaxies of stars, each of them similar to our own Milky Way Galaxy, have been sighted and listed in the course of a Harvard University astronomical survey of the Great Bear area of the northern heavens. According to Dr. Harlow Shapley, Harvard astronomical director, use of the Mt. Palomar 200-inch reflector would reveal more than 1,000,000 galaxies in the bowl of the Big Dipper alone.

NEW hope is held out for leukemia victims, until recently counted as good as dead. Anti-vitamin chemicals, known as folic acids antagonists, have been administered to leukemia sufferers and have prolonged their lives by as much as a year, stated Dr. Frank H. Bethell, medical professor at the University of Michigan, at a recent meeting of the American College of Physicians in Indianapolis.

DESPITE their traditional label as the stronger sex, men are actually weaker than women, says New York Psychologist Dr. George Lawton, a Cooper Union lecturer. It is Dr. Lawton's claim that men have not only more severe emotional illnesses but suffer from more fatal illnesses, higher alcoholism, suicide and delinquency rates.

EXTRA-special scientific developments of 1949 were, according to Watson Davis, director of Science Service, 1.) the Beria Bomb, 2.) arthritis cures, 3.) anti-cold developments, 4.) seasickness cures through dramamine, 5.) one-stop world-flight by USAF bomber in 94 hours, 6.) development of guided missiles, 7.) commercial development of chloromyecetin, 8.) discovery of Stone Age man in Alaska, 9.) development of fluorocarbons and 10.) discovery that infra-red transmitting lenses can be made from germanium metal opaque to ordinary light.

ROCKET travel from New York to Los Angeles in one hour awaits only the construction of the rocket, says expert Dr. Hsue-Shen Tsien. Such a rocket-liner, he claims, will reach a 27-mile altitude on its initial thrust and coast the rest of the way.



It did not take long for him to work his way out and

THE ETERNAL

CHAPTER I

HE WHO LIVED

HERBERT Zulerich was a big heavy-framed man with a tangled mop of shaggy hair which lay back from his sloping forehead and clustered about the collar of his dark coat. His nose was big and prominent, jutting like a huge peak upon his face, and his mouth was a deep-lined canyon between that peak and the bulge of his chin.

Zulerich's habits were as strange

as his face, ponderous as his big body. How he lived no one knew and no one knew either how he managed to maintain his formidable array of test tubes and retorts. In his laboratory was every conceivable kind of peculiar glass, holding liquids of all colors.

Zulerich had been at one time a chemist of more than local fame but of late years he had become a recluse, staying alone most of the

Zulerich Learned to Live Forever, but Even



poke his grizzled head into the gray light of a rainy day

MAN

a novelet by **D. D. SHARP**

time in his big stone house, just back of the highway where the constant stream of autos seemed to disturb him but little.

In truth they disturbed him a great deal. Some days he would watch them in their hurry as they drove furiously along the straight line of paved roadway and into his face would come gloom and melancholy. Into his large blue eyes would come a hurt look, and an odd feeling

of sympathy for those who seemed so full of life, so gay, so thoughtless, would creep into his heart.

"Death! Death!" the old man would whisper. "Man goes through long years of preparation for the few days of accomplishment before the conqueror destroys all."

"So much preparation," he would whisper as he shook his big head. "So many brilliant minds polished and blazing for an hour, like roses

the Far Future Was Not Ready for His Gift!

grown and tended to be cut for an evening's bloom. Hands so skillfully trained and so soon folded quietly at rest."

That the old man was in quest of some great secret everyone who knew him had long ago suspected. But what that secret was no one knew and few could hazard even a guess.

THE truth was that Zulerich was obsessed by the single thought—the appalling waste of death. And since science and invention were conquering the other enemies of man's existence Zulerich had set out, after the example of Ponce de Leon, to discover the elements which might be combined to give man eternal life.

A fantastic quest, seemingly hopeless, yet Zulerich felt that he was making progress. He had discovered things which had astonished even him. Some of his experiments had awed and stupefied him and then he made a discovery which gave him a decided fright.

He had been experimenting with unicellular organisms and had found that they did not behave as inorganic chemicals did. He knew that the reaction of these animalcules was distinctly physiological, not merely physical, organic, not purely chemical.

They did not resemble any known chemicals, for they reacted as individuals and not as mere materials. This discovery, he found, was confirmed by Jennings in his book "Behavior of Unicellular Organisms."

Old Zulerich had studied the intricate processes of cellular division and multiplication, hoping to penetrate the law of the organism and discover what it was that, at the peak of growth, prevented further cleavage of cells.

In short he wanted to find the principle which confined the limits of size and growth. Find what it was that caused the cells of a living body to increase and multiply until ma-

turity and then cease growing except when incited by a cut or other accident to the tissue.

Why should a cell become active to replace wounded flesh, yet balk at rebuilding vital tissues, such as the lungs? Or refuse to replace a lost tooth more than once?

He experimented in numerous ways to provoke cell growth, trying to divine whether they had individualities of their own or whether they were bounded by the individuality of the whole. He wanted to find whether cells had an intelligence which caused them to do the remarkable things necessary to their coordination in the body.

Zulerich found out many things—mystifying things which no amount of scientific theory could possibly explain. He perfected chemicals which, applied to a rabbit's head, caused its hair to grow so long as to make it necessary for him to gather it into a bag.

And even then the weight of it grew so great that the rabbit could no longer drag its load and he killed the animal out of mercy. But still its hair grew and grew.

His high-walled backyard soon held some monstrous freaks produced by his chemicals—dogs with heads as big as water barrels and bodies of normal size—rats with bodies as big as cows and heads no bigger than peanuts.

And one day he applied a chemical to a horse's eyes and the eyes grew out of their sockets like long ropes of white sinew with great knobs of gelatin-like iris—limp flabby canes that dragged upon the ground.

The effect of this last experiment so cut the kind soul of Zulerich that he killed all the monstrosities and recoiled from the thought of making more. Then he looked again from his window over the wide world where death laid waste, sighed, tightened his lips and plunged into his work again.

It was not growth that Zulerich

wanted. He was quite content that man should retain his present stature. What he desired was to increase man's years.

And then he discovered it. He did not need to wait and watch until the end of time to determine whether or not cells would eventually die. He knew that they would *not* die.

A few drops of the pale green fluid in the graduating glass he held in his hand would permit any man to live eternally. For he had at last found the combination he sought—the chemical which continued life without the necessity of decay.

AFTER a year of experiment upon his cells he tried a drop upon a rat. He caught the rat in one hand and held his medicine dropper with its pale green fluid in the other.

But as the dropper released its globule the rat moved its head and the drop hit the side of its face, trickled down and spread about its throat. It left a scar upon the hair, a peculiar scar like a question mark. Zulerich tried again with a second drop with better success. The rat swallowed it.

Zulerich watched carefully. The animal's heart seemed to cease beating. The lungs became motionless. And yet the rat lived with the fire of life in its pink eyes. It lived on, day after day, week after week, month after month, without the slightest loss of weight or sign of hunger or thirst. It lived with its tiny soul imprisoned inside it.

Yet even then Zulerich dared not himself drink the elixir, though his work was exhausting his strength and his heart was growing weak—its flutterings made him take fright at times. For there was a flaw in his experiment.

True, the animal lived without breath, food or water. But it was entirely *unable to move*! Looking at it one would take it for dead, except for the glow in its fierce little eyes and the entire absence of decay.

Zulerich set out to mend the flaw.

He worked feverishly, knowing his time was short. He did not want to die with success just within his reach. He did not want to come so near offering mankind the boon it craved most of all only to fail when in sight of his goal.

A year passed before Zulerich found the ingredient lacking in his pale greenish drops. The very simplicity of the thing had caused him to overlook it in the beginning and his discovery of it was almost ludicrously accidental.

One day he had a pail containing a solution of cleansing soda near the windows and was washing down the dusty glass so that he might see out over the blighted world and gain strength from its curse to continue his work. He would allow no one else in his laboratory and washed the windows himself.

A few spattering drops fell into the motionless upturned mouth of the rat where it stood upon the casement. Its mouth was open in the same position it had held when Zulerich had forced it to receive the life preserving drops. It had stood there, a tiny paralyzed living statue, while the four seasons of the year had gone by.

Today Zulerich had thought to remove the animal from the windows before beginning to wash them. But as he had grown older he had grown more absent-minded, less able to use the care and forethought of former times. And this time his carelessness produced an amazing result.

No sooner had the soda dropped into the rat's mouth than it squealed and scurried for cover. The very next instant it was out, nibbling a crust of cracker the parrot had dropped upon the floor.

Overjoyed, Zulerich watched the rat regain the use of its muscles. But anxiety soon crept into his joy. The rat developed hunger. Hunger foreboded decay. Decay meant death.

Pondering them he trembled. He was old, he had not much time to

watch and wait. Even now, as a result of his suspense and relief over the new discovery of the soda drops, his heart was fluttering alarmingly.

And there was something new, frightening, in its flutterings. Had his time come at last, now, when his precious experiment was almost completed, perhaps perfected, but not yet given to the life-hungry world?

All the legends he had ever read of the discovery of elixirs of life had had their fruits frosted just before the eating. Was it to be so with him? Was this the end?

He thought of his drops! Quickly he stepped over to the table. He snatched up the pale green vial, dusty from long idleness on the shelf. He measured off the drops. His hand trembled so that the vial itself dropped to the floor and spilt its precious fluid. But he drank the drops in the measuring glass. Then he reached for the soda water sitting just within reach of the touch of his hand.

HE COULD not move! He had forgotten, forgotten that he would be unable to bring the soda to his mouth. He had overlooked a very vital thing. What was to be done? Nothing. There was nothing he could do but sit and wait—a neighbor might pass. He sat immovable as though cut in stone. He could not move even an eyelid. He was frightened.

No neighbor passed who saw him. A week went by.

The rat played all over the room. It came out mockingly upon the table before him. Zulerich regarded it closely. It was not breathing.

Another week passed before anyone came into the house. The rat had become bolder and Zulerich had used his enforced leisure to observe it. He knew his experiment had been a success. The rat only consumed food to replace its physical energy. It needed fuel only for movement, running about the room, which of

course was a method of decay.

But the rat needed no food to support its life. Zulerich knew he had discovered the great secret. He had attained perpetual life, life which needed food only for its physical energies, for movement, not for life itself.

Then a neighbor peeped in. His first look of uneasiness gave way to one of pained sorrow. His face became melancholy as he saw old Zulerich sitting motionless upon his stool beside his chemicals. Such lack of motion could mean only one thing.

Zulerich tried to cry out but his voice, like his limbs, was paralyzed. He tried to croak, even to whisper, but there was no noise at all. Finally he put all his appeal into the fierce cold fire of his living eyes. The man saw those eyes, bright and living. He slammed the door and fled the room.

Zulerich became a world wonder. No one knew what had happened to him. They thought he was dead. They surmised that he had spilled some mysterious compound over him which had embalmed him with the look of life still in his eyes.

Undertakers came from long distances to study him as he sat in his laboratory. They pried and tested the fluids in the bottles. Time passed—months, years—and still old Zulerich sat, a corpse but unburied, motionless but alive. Yet they did not think he was alive. They believed he had discovered some marvelous embalming fluid. His house became a kind of museum in which he was the only exhibit.

Old Zulerich, growing no older at all, knew all this. He sat there, in a glass case now, hearing all they said and seeing before his eyes all that was done.

And in the dead of night the rat with its selfishness and eternal life and the unselfish chemist in his glass case would meet again. The rat would scamper across the top of the glass case in which Zulerich sat as stiffly as though sculptured

in stone.

It would sit upon the table before him and stare at him with red spiteful eyes. And Zulerich always knew it by the peculiar scar upon its neck. The rat had what he lacked. For one long year the rat had been frozen as the man was now and the man had then given it movement as well as life.

Could the rat do as much for the man? Would it if it could? It hated him. It never brought him the few drops of alkali he craved.

And one day they packed Zulerich carefully in a case and took him away from the place that had been his home. When the case was opened he found himself in a lofty building with the mummy of a Pharaoh on one side of him and musty relics of other ages all around him. He recognized the old building for in other days he had loved to visit it, letting his fancies wander over these fragments of a vanished age.

As he sat there upon his stool, protected within his glass case, the unalterable line of his vision vaulted the narrow aisles below him and gazed through the great glass of a tall window in the opposite wall.

OUT there he watched the throngs passing. People of a day—men who yesterday were babes in mothers' arms, today fighting up the long and difficult ladder for their fragment of success, to leap tomorrow into oblivion from their allotted rung.

Things changed, manners, customs, techniques, ways of life. But Zulerich grew no older, Zulerich did not change. And the rat—the rat to which Zulerich had given the gift of movement—it too, wherever it was, lived on also.

In all their years upon earth it was bound that these two, rat and man, should meet again, the rat with its selfish greed and the chemist with his unselfish dream. Had the rat been seeking him so that it might gloat over him as it used to do? So

that it might scamper upon his case and deride him with its motion?

The night roundsman of the museum saw the rat, beat it with his broom, mangled it with his big heel, left it upon the floor until morning so that the cleaners might take it away.

But before the cleaners came the next morning one of the scientists who was studying Zulerich saw the rat lying there upon the floor before the case, its body mangled, its eyes so bright and full of pain.

He stooped, examined it. An exclamation broke from him. The rat's heart and lungs were quiet, it seemed quite dead, yet its eyes had the same living look of the man Zulerich in the glass case.

Thus it came about that the rat too was placed under observation, set in a tiny case upon a perch just in front of the glass tomb in which old Zulerich sat looking out upon the great world through the big window.

The rat cut off part of the vision of the old man. His vision in frozen focus, he had perforce to gaze straight into the eyes of the creature to which he had given eternal life and to which, mangled now by broom and heel, had been given eternal pain as well.

Life streamed by under the old man's gaze, burning up with decay. Yet he held the secret all people so much desired. He held the connecting link between them and eternal life, a few drops of alkaline water. The wires of communication were down and none had the wisdom or the wit to raise them up. *He* had the secret, they had the power—if they only knew.

Eager and anxious, weary and bowed down, discouraged and broken, the people of the world tramped by in torrents of wasted motion. The undying man and the undying rat stared hatefully at each other. The undying man's mind kept on working, everlastingly seeking some means of breaking the paralysis of

his body so that he might give eternal life to humanity.

Then he learned a great lesson from a small child.

The child, entering the museum with her father, saw the mangled rat, saw the pain and the desire for death in its eyes. And the child begged her father to kill the little rat as he had killed her little dog after the automobile had run over it. The father had smiled down on the child tenderly.

That night Zulerich's eyes softened as he regarded the rat under the bright glow of the electric lights. In his heart was remorse and a new-found wisdom. He was glad now that he had been unable to give mankind his magic formula.

For he knew now, past all doubt and deep down in the living soul within his undying body, what the true answer was to all his dreams. He knew that one should improve life before trying to lengthen it.

CHAPTER II

REVIVAL

YEARs and years passed over Zulerich, sitting in his glass case entirely unable to move, even to raise an eyebrow or lift a finger. He grew no older. However, with the years there came a change in the manners and moods of the human beings who passed him every day as they wandered curiously about the museum.

Sentiment warmed and grew so that it had a great influence over the minds and actions of the people. They became more and more easily swayed by soft gush of unthinking folk. They became wrought up over old Zulerich and demanded that he be buried. Some of them sobbed a bit over what they called the desecration of an old man's dead body.

The scientists who controlled the

museum protested the maudlin sentiment. They almost guessed that Zulerich was still alive, needed but some secret potion to revive him, though they had no idea what that potion might be.

Zulerich heard the whispers and speeches and discovered that a movement was under way to have him buried. Naturally in his condition he became terrified for he could not speak. He could not move. He could make no protesting outcry at all. He could only stare straight before him and feel very much afraid.

As months passed the movement gained support. Zulerich thought day and night, trying to think of some way to beg the leaders of the new movement to let him alone. But he could think of no way at all.

He stared at the cleaners as they washed down his case with great dousing swabs of alkali water from their sloshing pails. A few drops of that liquid would release him. Yet there was no way to hint that he wanted a drink of the suds.

Terrifying hours he spent. He listened fearfully to every footstep which came down the narrow aisle. He watched every solemn face. He feared every approach. Every man in black seemed to him to be the undertaker who would remove him from the brightly lighted museum and take him to the darkness of an eternal grave.

Finally the hour came. Two men entered the room briskly. Zulerich did not guess their mission until they opened his case and took him out. The keeper of the museum watched wistfully and turned his back upon them as they took him down. He felt their warm hands upon him and they chilled him with terror.

After he had been put in the ambulance and driven away to the morgue he was placed in a cheap steel casket and rumbled out to the cemetery. Fright grew in his kindly old soul as he felt them remove

his box and sink it into the grave. Then he heard the sullen fall of spaded earth.

Every nerve was taut and strained, trying to command his voice to cry out, yet not a whisper left his lips. He tried to rise, to pound a hand against the lid, but he could not make the slightest move. The thudding became fainter and fainter until black silence crept in to keep him company. Silence rang in his ears. Darkness spread like a great void all about.

SO HE lay, day on day, night on night, and both were the same in the black grave. And he grew used to the darkness and the silence and his thoughts quieted and ripened like old wine in a dark place. He became very wise in meditating upon things he had observed while on the earth.

His thoughts were of bright sunshine upon bright flowers, of the warm moist earth at springtime when buried seeds burst their prison to send up their shoots. Seeds that were so like him, seemingly dead but with eternal life prisoned in them.

He recalled poems and scanned them line by line to dwell upon their beauty and mull upon their thought. He reasoned out theories. He pondered facts. He dreamed dreams.

Then, when he could think of nothing new at all, he would begin all over and retrace his thought again. Over and over his fancy circled the unending memory of old days and wove into them new imaginings. Still black silent night held reign.

Eternity is a long time and much can happen in it.

Even the steel box in which old Zulerich lay rusted and grew weak and thin. There came the rains of the great wet years. Water trickled into the sod and found the mouldy cavity where rusted the steel box.

A tiny leak came through a rusted hole in the casket lid and water dripped upon his forehead all night. All night or all day, he could not tell

which, for day was as night in that grave.

On and on the drip continued. Tap, tap, tap, tap, like the tick of a clock almost run down. It broke in a new place and dripped upon his chest, his limbs and finally into his upturned mouth.

His nerves were tortured with the constant drip of it. He tried to move just a little. He wanted to let the splatter of it fall in a new place. He tried to move though he knew from experience that he could not.

But he did move! After more than a hundred years of stiff hypnosis he moved! He stretched his legs. He closed his muddy wideopen eyes and then he fought furiously to get out.

The drip through the gypsum clay had carried in it the small amount of alkali he needed to get back the use of his muscles!

Squirming about against the steel lid ripped it loose and a strip of it broke off in his hand. With that as a spade it did not take long for him to work his way out and poke his grizzled half-bald head into the gray light of a rainy day. He crawled naked into the fresh sweet rain for his clothes were as ash and had fallen from him while he worked his way out.

Out on top of the earth again! He had not dared dream of it as he lay paralyzed with earth spaded upon him. Such a miracle had not occurred to him at all!

He smelled the moist clean freshness of a rain-washed earth. The fragrance of new blossoming flowers, the sweet meadows which spread green and luscious all about him.

The pain and misery of his long dark wait below was behind him. It was forgotten in his joy at being above the earth again, able to move again. He was in a new century and the scientist in him was alert as he hurried down from the top of the little hill where he had been buried.

He wondered what he would find

in the old town. Had mankind advanced? Had they continued the unparalleled progress he had witnessed during the twentieth century or had that been merely a mushroom growth already decayed? He hurried down to see.

IF POPULATION were any answer man had certainly progressed. The old home town had swelled out beyond the forested hills and it seemed to have been remade. It glowed with a white beauty undulled even by the dreary day.

Light glowed from every wall and tower, soft and radiant like the glow of a firefly. The whole city seemed painted with some luminous enamel which glowed more brightly with the passing of dark clouds and dimmed with the rifling of them.

There were no streets as he knew them in the old days. Instead there were crescents and stars and circles landscaped off for the setting of stately buildings. Many people were about but they were high in the air, traveling here and there very rapidly in small planes which were of a peculiar butterfly pattern. They were tinted and exquisitely lighted.

Zulerich dared not enter the city for he was naked. Still, those above seemed not to notice him at all as he crouched behind a statue of white marble.

Finally a plane dropped vertically from the sky. He drew away, expecting to see it dashed upon the base of the statue near which he crouched. But as it dived toward the earth the beautiful butterfly wings began to revolve around and around and it came down as lightly as a bird upon a twig.

A man crawled from the plane and stared at Zulerich in astonishment. "What are you doing out here naked, old man?" he asked.

Zulerich was staring a bit himself, studying every feature of man and plane. So this was a product of the twenty-third or twenty-fourth century. Zulerich's interest was

alert as to what changes had taken place in man and mechanics since his time on earth.

The man seemed rather more feminine than men used to be. He had soft delicate features, slim, perfectly-cared-for hands, a low well-controlled voice. The plane was seemingly made to please the eye as well as to be of service.

"Where did you come from?" the man asked, piqued by Zulerich's close observation.

"I dug myself from my grave," Zulerich answered, knowing the surprise he must awake. "My box rusted from me and I dug through the wet clay."

The man frowned. Zulerich shook a little in the drizzle of chill rain.

The man's tone changed when he spoke again. It became indulgent.

"Sure, sure," he said consolingly, "but who are your people, old man?"

"There must be none alive," Zulerich answered with nostalgia in his tone. "There will be no one, I am sure, none who know me, for I have been buried for so long a time. I had no way to number the years but I must have lain there in the grave for centuries.

"Still you may have a written remembrance of me, for I was a great marvel in my day. I found the compound which would perpetuate body cells, the pale green drops of eternal life!"

"Sure, sure," the man said indulgently, "but where is your home? With whom do you stay? I will take you there. Can't you remember where you live?"

"I am not insane, sir," Zulerich said, looking the man straight in the eye. "The story I tell is strange but I can prove the most marvelous part of what I saw. I still remember my formula and I can give any man who drinks of it eternal life."

"You don't expect me to believe that?"

"Yes."

"Old man, you're crazy as a bolo. You'd better let me take you home

or else go there yourself. Get on some clothes. You must know it's been a hundred years since people were allowed naked in the streets! The new rule won't stand for naked men, you ought to know that!"

"I know nothing of your rule, son. I have just come out of the grave. I have not seen the good light of day since the year of Our Lord two thousand and thirty-nine."

"You act well," the man admitted. "You have taken on the old form of speech, you dare walk naked in the street and you hint that you reckon time by the old Julian calendar, which has been in disuse for more than a hundred years. You act too well to be entirely insane."

The man stared straight into old Zulerich's clear eyes. His face lighted as he seemed to arrive at a conclusion.

"Prove that you can give eternal life! By all the truth of science it will open a place for us both in the chamber of the Rulers."

"Give me some clothes," Zulerich demanded, "take me where we can talk. Allow me yet a little time so that I may see that man is ready for them and I will give to every one that wishes the pale green drops which will cause him to never die!"

TURNING, the man opened the tinselled door of the little plane.

"Come," he decided. "I'll give you clothes. I'd do that much for anyone. Not that I believe a thing you say, not a bit of it."

"I will prove what I say," Zulerich affirmed. "I will give my secret freely to you and all the people. I have always loved them, felt a deep pity for them all, sorrowed at the waste death laid upon their lives, regretted that when man was just learning how to live it was ordained as time he should die.

"The earth is already filled with a new race. They seem to have the secret of perfect health and luxurious life. I will add the last and greatest gift! They shall have time

to work into their years the pattern of their dreams! They shall never know again the fear of death!"

Into the man's face crept a glowing avidity. Zulerich knew it was a hunger of eternal life, a desire to outwit eternal death!

"Lord!" the man whispered, "If you were only not crazy after all?"

He stared in dumb silence as though the possibilities of such a dream were too much for speech. There came a measured, rumbling tread from somewhere below the earth. The man drew rigidly erect and stared about. He grabbed Zulerich by the arm.

"Get in," he urged, "the telecops must not sense you. They would have you before the Rulers!"

Zulerich slid his naked body into the seat and sank into soft satin cushions against the far door. There were many strange switches and lights and knobs he did not understand. Certainly in this age mechanics seemed perfected.

The man slid in beside him. The butterfly wings began to whirl around and around over the cab and sucked the plane straight into the sky. Far above the city the wings ceased whirling and the propeller ahead began to spin. The wings spread rigidly from either side of the fuselage and they sped away much as planes had when Zulerich lived before upon the earth.

It would take volumes to recount half of the mechanical marvels Zulerich saw in that one city. It seemed to him the world had become an Aladdin's lamp where the slightest touch yielded satisfaction to the greatest desires.

There was one thing he remarked more than all the others and that was this—though all work that man desired was done through power broadcast by radio over the whole city, not one smoking chimney told of a power house, not one river was harnessed and not one gasoline engine sputtered in plane or factory.

Zulerich asked his companion

about this and was told that man had long ago learned to use energy from the great source itself. The sun furnished all power through a series of intensifiers which caught the sunlight and brought it into one startling blaze of incandescent heat.

This beam was shot downward like a searchlight to the engines, which ran all day and stored power for the night. On occasions power could be transmitted by radio from stations with a surplus to those that needed it. Power could even be drawn from the other side of the earth should it be required.

CHAPTER III

A NEW WORLD

THE man's name proved to be Rhuh, which, in accordance with the new system of naming men, gave his vocation, his race, his town and his standing in the community.

Rhuh took Zulerich to his home and gave him clothes. He was invited to dinner and, being very hungry and without an idea where else to obtain food, Zulerich accepted.

The meal was almost wholly of synthetic foods, manufactured, so Rhuh stated, from sunlight, gases and minerals, without recourse to the slow growth of plant life. There were also fresh figs from Smyrna, grapes from California and a new tartly flavored fruit from southern Texas.

Zulerich had seen no railways or freight planes and expressed a wonder how these fruits had come so fresh from so long a distance. Rhuh explained all food and other freight was sent into the cities through great tubes where compressed air shot the containers along at the rate of hundreds of miles an hour.

"The cities are much overcrowded," Rhuh complained. "Men pile upon each other like bees in a

swarm. There has been no war for two hundred years and no pestilence in more than half a century.

"There are no longer guns or spears or lethal weapons of any kind. There are not even sporting arms for there has been no wild game for generations. The few animals left are in zoos or laboratories. Meat as diet is looked at as barbaric."

Rhuh made a pellet of a waxlike substance and rolled it between his finger and thumb, then dropped it into a little bronze vessel where glowed a jet of purple flame. Immediately there came an aroma which filled the whole room. The smell was rather heady but pleasant.

"Carteesh," Rhuh explained. "It has become a national habit, much like cigar and cigarette smoking in other days."

"Rather nice-smelling stuff," Zulerich commented.

They sat breathing the peculiar incense, relaxed, day dreaming. Finally Zulerich asked, "Is the whole earth as overpopulated as this city seems to be?"

Rhuh drew himself from his fancies, snapped a switch and pointed toward what before had been a tall white wall. Now it seemed a large window, looking out upon an untamed jungle.

He touched another switch and the jungle seemed to flow back like fields beyond the window of a railway coach. Zulerich leaped to his feet. It seemed the whole house was in motion, flowing over a tropical jungle. He sat down again, slightly embarrassed, smiled and watched.

"Television, I suppose," he commented.

Rhuh nodded and said, "The foibles of human nature have always puzzled me but here is one which exceeds all the rest for lack of explanation. Men are packed in our cities until the subways are cleared by oxygenized air and yet the most fertile and picturesque sections of our globe are totally uninhabited.

"This would not seem queer were

transportation a matter of discomfort. There is absolutely no reason why we should pack up in certain spots as though there were no standing room anywhere else.

"Yet ye do and were it not for our excellent medical service and our very efficient *telecops* we would be exterminated by our own gregariousness."

"But surely," Zulerich exclaimed, pointing to the intense tropical growth, "there are animals in these forests."

Rhuh twisted the little brass knob under his fingers. The forest seemed to rush closer until the long palm-like foliage spread thick and jumbled before them. The tropics were there for all Zulerich could tell, dense, luxuriant and still.

He peered into the undergrowth and scrutinized the foliage and tree trunks, as they passed very slowly now. He could not find a bug, or a bird, an animal or a snake.

"Why?" he asked.

"It was not always that men were lazy as they are now. There was a time, nearly a century ago, when everyone, male and female, vied with others in activity of brain and body. At that time scientists had learned that disease was due almost entirely to parasitic life and parasitic life was fostered mainly by the lower animals. That was the age of gas.

"The age of electricity had just passed and men having exhausted its resources were turning to gas for study and accomplishment. New gases were found almost daily and new uses for gases. Gas carried men about, composed more than half their foods, heated them, cooled their cities and their foods, healed them, entertained them.

"Acting upon the common impulse to rid life of disease a great student of gas discovered *tertopelium*. It was brought from far above the earth by suction to the cylinders and forced into tanks by compression. It is still the lightest known gas, being found high above the

earth's atmosphere.

"This student found that *tertopelium* would destroy all lower animal and microscopic life but would not harm man at all. I believe even as far back as the twentieth century of the old Julian calendar chemists had discovered powders that were poisonous to insects but entirely harmless to man.

"Not to bore you with details *tertopelium* was condensed and mixed with a heavier gas to give it weight. Then the entire surface of the earth was flooded with it from planes. Since that time there has been no parasitic or animal life in our forests.

"*Tertopelium* did a very efficient job. Whether nature will evolve the like again can not be proved or even guessed for a good many thousands of years."

WHILE the topic of conversation was life and death Zulerich asked Rhuh what ideas prevailed as to the ultimate future. It seemed that man had abandoned hope of eternal life upon this planet or any other, though the very fact that progress had always been toward perfection should have strengthened rather than weakened faith in future life.

And because of this doubt as to life beyond the grave Rhuh was all the more eager to prove the hope Zulerich now dangled before him. But as Zulerich questioned and studied he was not so enthusiastic about his promise to give life to the people. He was a man of deep faith. He knew that faith had fostered and mothered every accomplishment and he doubted the wisdom of giving men eternal life when they had no faith and no vision. So he talked on, letting his mind run along one channel and his words another.

He told how he had discovered the secret of the mangled rat which had so upset him with the pain in its eyes, of the scientists who had studied him and of the sentiment which had buried him. And Rhuh in

turn told of many new and incredible marvels which Zulerich had never thought to be possible.

Rhuh finally seemed convinced that after all he was talking with a very old and very remarkable man and admitted that he really believed that Zulerich might have discovered the elixir of life. In those days there were so many new and wonderful things that men had long since ceased to hoot at anything.

Zulerich commended the spirit of progress so evident all about but Rhuh did not seem to possess any of his enthusiasm.

"Yes," he admitted, "we have made incredible progress over the old age of invention of two hundred and more years ago. There is no need now that anyone should be in want or be denied the luxuries of life."

But in the days that followed Zulerich found that the masses were in want. The Rulers had become insane with power, and ridden with a lust for accumulation of wealth. They took with a greedy hand for they no longer feared any uprising of the people or any embezzlement by employees.

The *telecops*, which guarded their treasure and maintained their power, were strictly mechanical and operated by a secret code that was known only to the owners. Political and social relations had in no wise kept pace with the progress of mechanical invention.

All advancement had been material. Politicians openly abused their government. Humility, charity, idealism, self-sacrifice—these were traits unknown. Love had a new definition and the new life beneath its mechanical perfection was a hollow thing.

So Zulerich told Rhuh finally that he would not give the secret of life to the people or to any one until some semblance of justice was done, man to man.

Rhuh stared at him for a moment with the corners of his mouth drawn

awry. Then he grasped his guest's arm and snarled, "Old man, you make good. If you've been lying to me, dangling a hope before me that is a hoax, if—" His lips twitched and jerked but no sound passed them for awhile. He was too angry and disappointed to complete his threat. Instead he jabbed at a button beside the table.

There came a hum above the house. A big plane dropped past the window. Zulerich looked out as it landed, light as a bird upon a twig. Its door opened. Three grotesque imitations of men got out.

They were giant fellows. They must have been ten feet tall with angular arms as thick as a man's thigh, legs in proportion with the arms. They walked forward with a stiff mechanical lockstep.

They reached the door, wheeled in perfect unison and came tramping in, bowing their heads to clear the doors. The whole inside of the house reverberated with the pulse of their measured tread. They filed in and Zulerich shrank involuntarily from them as they marched to where he sat.

Their heads were not round but boxlike and to make them more horrible they were fitted with great glass eyes which stared at one with wide greenish pupils as though they were dead. Of course they could not see for they were not live things, just mechanical police, but Zulerich learned later that they sensed a man or an object by the shadow thrown upon their eyes.

This operated an electrical device which guided them. In the back of each steel body was a hinged door, which looked to be a way of entering the mechanical chamber to mend any defects.

One of the *telecops* stood back at the door. The other two advanced and Zulerich sat as stiffly as if he were back in his glass case, wondering what they were about to do to him.

Long stiff arms reached out with

jerky moves and seized him with hard iron fingers.

"We arrest you in the name of the Rulers. Come!"

ZULERICH had thought the silent oncoming *telecops* were terrible enough but the mechanical voice had an impersonal tone which gave him a feeling of the utter futility of protesting or begging for consideration. He abandoned hope and made no resistance. He knew any protest or defense would be useless.

He rose and followed the man who had seized his arms, running to keep up, but in spite of all he could do he could not hold pace with the long legs of the mechanical giant and was dragged towards the plane.

He passed Rhuh at the door. There was neither pity nor leniency in the glare Rhuh gave him.

He was taken out and placed in the rear cab of the large plane. It was indeed a large plane in comparison with the small ones which flew all about. Under its wings and upon its fuselage was the triangular insigne of the police.

They rose into the air. Through the glass of the cab he could see a real man at the wheel. The three *telecops* rode in the rear cab with him.

A thousand feet above the city their course was set toward the east. They traveled all day and shortly before dark they came to a very large city, which was the capital of the world.

There he was placed in prison. The prison showed none of the advancement of the day, for the Rulers had little or no consideration for those who fell into their hands. The next day he was brought to trial.

Rhuh appeared against him, testifying that Zulerich had told him of a secret elixir of eternal life and had promised it to him for a suit of clothes and that Zulerich had taken the clothes but had not disclosed the secret.

The Judge of the court was indignant that such a case should be brought before him. He dismissed Zulerich and lectured Rhuh for believing in such foolishness. But later in the night the Judge sought out Zulerich and talked with him and tried to bargain for a portion of the pale green drops.

Zulerich was amazed at the cringing attitude of the Judge and said, "You ridicule me in your Court, yet you seek me in the night. Judges of even my day would not be so bold as this."

So he refused to bargain with him and was called before a council of the high Rulers. They made much over him at first, inviting him to the palace as though he were a guest. They engaged him with sly questions and finally prepared a feast for him. Every one of the Council of Ten was there.

He was a little awed as he ate and drank with them for Zulerich had always been an humble man, investigating for the sake of truth and not coveting honor.

When the feast was over every man sat a while in silence and watched him closely. Zulerich felt somewhat uncomfortable under their scrutiny and sat in silence, wondering just what their gravity could mean.

One of them finally asked, "Has there been time?"

A short dark man with a Vandyke, who had watched Zulerich even more closely and more carefully than the rest of them, nodded soberly.

Then he turned to those about the table and said, "There is something strange about this man Zulerich. He drank the poison. Each of you saw me pour it into his glass. Yet he seems entirely unharmed!"

"Do you think he is as he claims?" the Chairman asked.

"I do not know," the Vandyke answered, shaking his knotty head. "By all the laws of nature this man should be dead, yet he lives!"

Zulerich grew bolder then. They had tested the truth of his claim and were about convinced.

"I have the secret of eternal life," he vowed, "and I am one who loves his fellow man. When you shall do justice and be content one man to rule himself rather than another I will give it freely to you and to all the people."

They laughed at his speech, calling him sentimental and impractical. And when their ridicule had no effect they began to bargain with him for the secret.

But Zulerich in turn laughed at them, deriding them for offering so little for so great a thing as the secret of immortality.

FINDING they had made no headway they reduced their demands to one portion for each of the rulers but Zulerich shook his grizzled old head and muttered, "You are not fit for eternal life."

"We are nearly perfect," the Chairman insisted. "We lack but this one thing. We have subdued the earth. We have mastered all natural law except this law of life and death. Men and all of nature serve us."

"We will give you a place in our authority, allow you to share equally in our power, though we have bought this good thing with daring and danger and you have risked nothing at all. Give us so that we may live always and we will give you power over the earth."

Still Zulerich shook his head and speaking to the Chairman of the Council he said sternly:

"Your lack is greater than any of you know."

The trace of a fine sneer touched the Chairman's lips and he asked, "What is it, old man, that we lack except this secret of life and death? Tell us."

"Imagination," Zulerich said slowly, dwelling upon each syllable. "You cannot think beyond your own selves!"

CHAPTER IV

ZULERICH RELENTS

THE Chairman pointed a long white finger at him and said acridly, "I have no patience with your chatter. We offer no more bargains. We will have the secret out of you, old man!"

At the right of the Chairman sat a big bullnecked blond man of about forty. He shouted so that his bellowing voice filled the hall, "That is what I wanted to do at first!"

"Have the old dodderer's secret from him or give him the garrotte!"

"Checkmate, gentlemen!" the Vandyke objected. "If this old man really has the secret of eternal life he cannot die. We are frustrated by the very thing we most desire!"

A bushy black-eyed man beside Zulerich reached over and grasped the scientist's ear. He gave it a violent twist.

Zulerich winced involuntarily with pain.

The bushy man chuckled and spoke in a deep bass, "Gentlemen, I have shown you a way. Torture him! He can still feel pain."

The whole council smiled with relief. The bullnecked man shouted boisterously, "Have it out of him!"

The Chairman said very quietly, "Come old man, give us the secret or you'll have a mangled body to drag about."

Zulerich shuddered. For the moment he wished he had never clawed himself from his peaceful grave. He was a conscientious man and would rather have endured that everlasting night than to give these brutal men everlasting life in which to exploit the earth.

He remembered the mangled rat, the fiery pain in its eyes. He knew that wherever it was, it still endured the pain of the blow it had received that day at the museum more than

two hundred years before. If they mangled him he would carry his agony into the eternal years ahead. He did not feel that he could submit to it, yet he knew also that death was the only enemy these tyrants feared.

Death alone could conquer them and raise up new rulers with kinder hearts. Should he reveal to them his secret he would betray all men forever into their power. Still he felt he could not submit to eternal pain. It was too great a price to pay for other people's comfort.

The Chairman called out something in a peculiar tongue.

There came a measured tramping from outside the hall. The whole palace seemed to throb with the sound of it. The *telecops* were coming! He would be given over to them that they might mangle him!

The great oaken doors at the end of the hall swung back. Zulerich hitched upward from his chair as the square-headed giants with their set hideous eyes came marching through with a measured precision which shook the tiled floor. No one paid him any attention. They were smiling with certitude as to what would transpire.

With six-foot strides the giants came bearing down upon old Zulerich, who stood erect and determined to meet his fate bravely. They were hideous things, men without brains, without feeling, without souls! They were more dreadful than a firing squad or an army with fixed bayonets.

Iron hands reached to grasp him. Iron fingers clutched his arms. Iron arms raised him from the floor. The giants whirled and struck off toward the still open doors.

"Wait!" Zulerich begged, turning his big eyes upon the Chairman of the Council. "Give me a minute. I relent. I will give you each a portion of the secret drug!"

The Chairman gave a sharp command in a peculiar tongue. The iron fingers held him but the *telecops* halted and stood at attention.

"I will give you each a portion that will give to you eternal life," Zulerich repeated. "Stop this horrible procedure."

"Very well," the Chairman answered. "But do not play with us or attempt any sly schemes."

Another command was given and Zulerich was let to the floor, still surrounded by the mechanical giants.

"Have five bottles brought to me together with the quantity of each chemical that I shall write down. I shall then mix them in my secret proportions and from the brew I shall give each of you a vial of this solution and a vial for each of the governors of the provinces of the world. This you must take at the first peep of the sun on the first day of the week following the new year. Then you shall have eternal life!"

The Rulers were in great spirits. But one more caution suggested that they put upon his pulse a new machine which could detect by the quiver of red ink lines upon its tape whether a man lied or spoke the truth.

So they brought the lie detector and put its band upon his arm and its finger upon his pulse and then they asked him again, "Will the secret portion which you shall give us render unto us eternal life if we take it in the manner you have said?"

"Yes, it will certainly give you eternal life," Zulerich answered. And as they looked at the register upon the tape they knew that he had spoken the truth.

SO THEY brought him the chemicals and the bottles were put in the laboratory they furnished him. And when he had mixed the solution and bottled it he gave it to the Rulers, who sent vials to each Ruler of the provinces throughout the world, retaining a large portion for themselves and their friends and families.

So it happened that, at the peep of the sun on the first day of the week following the new year, all

the Rulers and their friends and families throughout the whole world drank of the pale green drops and sat or stood or lay in whatever position they were when they drank their drops. For like Zulerich when he first drank the pale green drops they lived *but they were entirely unable to move!*

But then Zulerich entirely lost his head in his joy over his success. Now that the tyrants were helpless and deposed he should have been wise enough gradually to release control to the masses.

Instead he published broadcast the news and proclaimed that all men should take the rewards of their own labor and live peacefully with one another. He invited them to drink of his pale green drops of eternal life and promised them additional drops which would give freedom of movement.

The people were quick to claim control of affairs but they were afraid of him and his drops, which had stricken their rulers in such a perplexing way. Even Rhuh, who had followed Zulerich to the palace, eyed him with a new awe and would not drink of the drops he had tried so hard to obtain.

Things rocked along in this way a few months. Zulerich, having no other home, stayed in the palace and Rhuh, curious as to what the scientist was about, stayed to watch him.

Some of the stronger labor societies and more intelligent men and women met in the courts and organized a new republic somewhat on the order of the old United States of America. People everywhere hailed the United States of the World as a Utopia which was to fill every need and wish.

But they leaned upon it too heavily and it gave way. Even in an age of perfected mechanics they learned that one's government depends chiefly upon what he puts into it himself.

Riots started in the assembly rooms and spread from city to city.

Men fought in the plazas and the disturbance was quickly scattered over the whole earth. There was soon no safety or peace in any city of the whole world.

Anarchy followed. Industries became idle through lack of labor and fear of pillage. The fighting was savage—tooth and fist, cudgel and stone, with fire set to anything that would take flame.

Soft cultured men suddenly slipped their veneer and became wolves through rage and fear. Weakened by a life of mechanical efficiency they had not fighting strength, yet they were as fiercely bloodthirsty as any of their savage forebears.

Zulerich heard with growing sadness the tales Rhuh brought to the palace. Works of art, chemical formulae that had been perfected by lifetimes of patient experiment, machinery which had been constructed through years of tireless labor, were being mutilated and destroyed.

Men had gone mad with too much freedom. They had no control over themselves. They had been too long dependent upon stronger wills than their own. And Zulerich became wiser through his second great mistake.

He knew that he had overthrown one evil and spread a greater one. He found out most certainly that any government, no matter how despotic or rotten it might be, was far better than no government at all!

He faced a new problem. He mulled over it as the progress of a thousand years was being pushed backward into oblivion.

Should he revive the tyrants? Should he return the selfish despots to power? Should he allow them again to take control and grind the people forever, now that they had eternal life?

Before he reached the solution to these questions Rhuh betrayed his hiding place to the people. Zulerich did not learn of this until it was too late for him to run if he had wanted to do so. The first inkling he

had that the mob wanted to kill him came from the drone of its planes above the palace. He could not believe they would hate him because he had taken away their Rulers from them.

He peered from the palace door as he heard the noise of planes and raised voices. The sky was swarming with the small highly-colored planes. Every landing place in the park was crowded with them. One lighted on top of another.

Men leaped from them to pack the court. They pushed forward toward the palace, storming it with sheer force of numbers. They were in a frenzy and seemed to acknowledge no leader.

ZULERICH stood alone. There were no soldiers, no police. The *telecops* which guarded the place were useless to him. But he was courageous with a self-forgetful superiority that ignored the menace about him. His one thought was of right and reconstruction, of stopping the senseless destruction.

He pushed open the big glazed doors which opened from the vestibule upon the outside steps, hoping with words of reason and a calm bearing to shame the crowd and give them a new vision.

But these restless men below him were not to be shamed by self-sacrifice and heroism. They were used only to obedience to iron wills. They respected nothing but the law of force. They had no code, no standard, except the desire to get while the getting was good.

They charged up the broad sweeping steps which spread a marble cascade below the doors. He felt the passion of their clawing hands, the hoarse bellow of their hate and lust, saw their dancing bloodshot eyes as they hissed and snarled.

The fury of it swelled until the very walls of the palace seemed shaken. The contagion passed from court to court. It seethed and boiled over to spread out through the city.

The sound and sight of such Babel almost drained old Zulerich's resolves. But he stood his ground for a moment, daring them to be as brave and sane as he. He stopped them in a semicircle of hesitating wrath, like beasts crouching before a whip.

He might have reasoned with them then, might have brought them to themselves and a knowledge of their senseless mania, but a sound grew behind the palace walls as silence spread before the palace steps.

New howls now had the swelling throb of unrestrained passion—the chilling thrill of unreasoning lust, the terrifying swing of irresistible force.

Zulerich had heard that cry of rebellion before. It had chilled him then to think of what the sleeping giant of revolt could do if it awoke. And it was awake now!

The swelling rhythm surged and grew, pulse on pulse, throb on throb, wave on wave. He turned and ran. Who could reason with this insanity? Terror had hold of the earth!

He plunged headlong down the palace hall, stopping only to shut and lock the big oak doors. He reached the marble stairs and took them with his long agile leaps. He passed rank on rank of rigid *telecops* as they stood at stiff mechanical attention against the wall. He passed their motionless eyes staring straight before them.

Those eyes sickened him as they burned on him with life. He knew what fear clutched the one-time fearless despots as they lay helpless before the trampling mob which howled down upon them.

But he had no time for pity. Palace doors were being splintered, furnishings wrecked and borne down as men clawed and crushed each other and beat across the tile with the drum of angry feet, while over all the palace swelled the rhythm of tramping feet!

"Fools! Fools!" Zulerich sobbed

as he leaped ahead. "Fools!" he shouted as he reached the next floor. "You are pulling down your own protection. Why must you always destroy that which you do not understand!"

But his words were as useless as the line of tall *telecops* which stood with infinite patience against the palace walls. The masses were as ignorant of controlling themselves as he was of controlling the *telecops*.

There stood the iron soldiers who knew only how to obey. They were the perfect soldiers without initiative or fear, waiting only the proper word, but he did not know how to command.

CHAPTER V

FLAME AND FIRE!

THE masses piled into the halls like medieval peasants storming a castle. There were no firearms. Men wielded sticks, chairs, missiles, any weapon they could find.

Zulerich ran swiftly and with endurance. The pale green drops had restored the agility of his early youth. But there was no escape. Men already were upon the stairs and swarming from the elevators overhead.

He was surrounded. There was no way past them at all. Hoarse bellows which cried for his destruction rose above the incessant howl. He made a turn about the second floor and took the next flight of stairs.

At the third floor men were also swarming. He turned down the hall toward the end of the building. Expansive windows made up most of the outer walls. Through these Zulerich saw a flash of the dreaded heat ray. It whipped here and there over the city like the blade of a great searchlight.

The brightness of it was such that it cut daylight as an electric

torch does night. It raked the city, found the palace and shot a broad blade of incandescence through the windows and down the hall.

Fire burst from it and furnishings flamed as paper thrown into an electric furnace. It was no billowy roaring flame which trailed lurid clouds of smoke. It was a quiet, intense heat, which blinded him and burned down the struggling men with the suddenness of an explosion.

A frightful sight, that blazing tongue consuming and leaving ash of everything combustible. It cracked the white marble walls and left them a red blaze of heat. It ate woodwork like a spreading acid.

Down in the lower floors of the palace rose shrieks and moans as the flashes leaped from top to bottom of the big palace. Zulerich darted into a nearby vault, stricken and almost overcome. He knew what had happened. The sun-reflectors of the municipal towers had been turned upon the palace. The mob inside was attacked by men of different political beliefs.

Zulerich lay panting in the open vault. He had fallen exhausted upon the floor, burned by the reflection of the flashes against the wall. As the blade swirled about like the flash of an ancient searchlight he saw it strike downward into the court.

Cries and panic sounded but the destruction went on. Shrieks drowned it now and then but it did not die. It rose again and again with new and lusty vigor as men crowded into the ashes of those just burned.

Though it was bright day outside the vault the hall seemed dim and hazy, much as a room will after one has stared into the naked sun. Zulerich got up and stumbled out the door, determined to leave the palace and to escape to some far land. There he might possibly gather around him a little band of men to organize a government of sanity and restraint.

He stumbled over something near the door inside of the vault. The

glaring search of the sunfire came swinging up the palace walls again and gave him a fleeting glimpse of what lay there.

It was the man with the Vandyke beard. One of the Rulers was still alive!

Zulerich stopped and shook him, shouting, "Wake up, man. Wake up! The palace is aflame!"

He had forgotten that the man could not move, that he was one of the tyrants who had tried to worm the secret of eternal life from him. But when the man stared up at him with fire in his eyes, his body rigid as though frozen, he remembered that Vandyke had drunk of his pale green drops and he remembered too that he must know the code which worked the *telecops*.

All he lacked was a few drops of alkali to give him speech and movement. If he could only get down to the basement, where he had his vials of alkali, he could revive this man and bring order out of chaos. The invulnerable police, which once had stricken fear into the hearts of the people, could again be about their jobs.

He picked up Vandyke in his arms and ran out into the hall. Even as he ran hurriedly for the lower floors he noticed that the *telecops* were as good as ever despite the terrific heat which had been thrown upon them.

They were evidently made to stand intense heat as well as any other mode of attack. But the vials of alkali were not for Zulerich just then. They were far below and he could hear men already crowding back into the palace, singing their dread song of rebellion.

The glare of the diabolical heat ray came traveling back again. Zulerich had reached the stairs and stumbled down them, falling heavily upon the landing, where a fountain spurted a jet of water and steam from its cracked and blistered marble base.

The glare grew swiftly. The heat ray was sweeping upon him like an

ancient machine-gun seeking out a nest. He twisted about and pulled himself from under the helpless man in his arms, who had fallen across his thighs.

He got to his feet with one leg wobbly and hurt and tried to hobble away but his kindly old eyes caught the upright stare of the man who could not move. He thought of the time he also had been helpless and had waited for men to come and put him in a grave.

His big heart would not let him leave the paralyzed man to be consumed. He reached down and dragged the stiff length of him to his feet and balanced him as he strove to make his wounded leg obey his will.

ALREADY little waves of heat were quivering from the walls and stung his hands and face unbearably. It began blistering long before the blade of fire reached them.

Zulerich dragged Vandyke over to the fountain, hoping that by some miracle the blade of flame would miss them and he could cool its reflection with the warm water. Yet it came steadily on, traveling upon them like sunshine across the earth through a rift of fast-moving cloud.

His whole thought then was of the alkali drops. If there were only some way to revive Vandyke they could run back to the vault and both be saved. But there was no way to revive him at all that Zulerich knew. Without alkali the rigid man was as helpless as an image of stone.

His own leg badly hurt, Zulerich stared about the palace like a trapped wolf. His eyes swept the burned furnishings, the brick-red blisters upon the white marble walls, the little heaps of ash which had been lounges, tapestries, pictures and doors. Then he looked again into the upstaring eyes of the only living thing beside himself in that charnel house.

Again he begged of heaven and

earth some way to put movement into Vandyke. True the man was a tyrant, a selfish brute who had sought to torture him.

Still Vandyke was the last link old Zulerich knew which might control the *telecops*. He had to save him, not through pity so much as to find the key to the mechanical men for they alone could restore order to an unrestrained race.

He splashed water over himself and then over Vandyke. It steamed as it soaked the hot clothing. The steam of it seemed to scald him. This must surely be the end, he thought. He must either abandon Vandyke and the key to power over the mob or be consumed in the flame himself.

He let Vandyke fall and turned to run. His feet crunched fallen ash of the thick carpet which had threaded the stairs. And that gave him his solution! *Ashes were alkali!*

He turned back to the man, who lay across the marble parapet of the dazzling pool. He stooped and raked a handful of ashes from the stair and crammed them into the open mouth. He dipped up a handful of water and washed them down.

Vandyke lay tense for a moment, much as he had through all the months since Zulerich had given him the drops of eternal life. Then he quivered a little. He seemed to realize what had happened to him. He leaped to his feet and shouted in a tongue that was hissing and strange.

There came a rumbling down the hall. It grew and reverberated throughout the heated place. A weird Phoenix life seemed roused within the blistered halls. It was the measured tread of iron men as they came marching from their position against the seared walls.

Vandyke turned and fled for the vault, leaving old Zulerich alone!

Zulerich stared helplessly at the back of the fleeing man. There was little use in trying to follow. His leg was badly hurt and he had delayed to revive Vandyke. He could not run fast enough to reach the

vault before being overtaken by that speeding blade of the heat rays.

Vandyke darted about the wall at the head of the stair. He would certainly make the vault in time. He would live on and on, alone. King of earth, ruler of *telecops*, master of men. King of earth, czar of ruthless control that asked no favors and feared no odds.

It would be a tyranny a thousandfold more unendurable than that Zulerich had sought to overthrow. Before, there were many Rulers, each suspicious of the others. Now there would be no check at all on the power of this new emperor.

Zulerich flung himself into the fountain pool. He did not expect the water, which was already almost too hot to bear, to protect him from the heat ray but with all his eternal life old Zulerich was human and he postponed dreadful fate as long as he possibly could.

A *telecop* came clanging by with ironshod heels that bit into the blistered marble. Zulerich reached from the pool and caught the mechanical man around the calf of his leg with arms that were strong with fear.

He twined his own legs around that iron one and was carried down the stairs with six-foot strides which took four steps at a time. The *telecop* made no effort at all to shake him loose. It was obeying an order which sent it straight to its duty and paid no attention to what it might trample or thrust aside.

Old Zulerich held on with no idea at all where the thing was taking him. He hardly cared just so he got away from the barrage of oncoming rays. But one floor down he saw with dull hopelessness that the *telecop* was striding straight toward the advancing fire.

He let go of the leg and fell beside a door. The *telecop* ran on, unmindful of him. He got painfully to his feet and opened the door.

Then he went down on all fours and crawled into the room. It was a large sunny room with big windows

lining the east and south. Zulerich stared at them helplessly. There was no protection here.

Before he could crawl away he found he had no more need to fear the flash for it was stricken from the palace and snapped out. Evidently Vandyke's command had been broadcast to *telecops* much nearer the power controls than the palace.

CHAPTER VI

WHAT THE BOOK REVEALED

WITH intense relief Zulerich halted and dragged himself into a chair. Then for a time the scientific curiosity of his nature was stronger than the pain of his wound. He was in one of the famed experiment rooms, where machines of various types were perfected.

All around him was a bewildering array of strange contrivances. There were great vacuum tubes taller than a man, induction coils as large as an ordinary room, wet and dry batteries as large as the vault in which he had escaped the sunflame, other batteries as small as thimbles.

Electrical charges were running through the tubes with violet, green and blue fires and one of them glowed with a flame that was almost black. There were electrodes with knobs as large as footballs which reflected his half-bald head in their polished brass. Wires ran here and there while buttons and switches crowded the table.

Zulerich got up from his chair and hobbled around, looking curiously at the complicated mechanism. He found his way behind a panel of switches and sat upon a stool to examine his leg. There seemed to be an incomplete fracture of the shinbone but it was not as bad as it was painful. He thought it would heal with a few weeks in bed.

He lost interest in his wound

when he found a book lying open upon the table before him, where a scientist had probably last written in it before going down to join the Rulers when they drank their pale green drops.

The book proved to be a tabulation of experiments which the scientist had been making. Zulerich became so interested in it he forgot that Vandyke was alive and would probably try to destroy him.

He forgot his blistered hands and face, forgot the destroyed Rulers and the nightmare of horrible sunflame. He forgot everything except the marvel of scientific data before him and the audacity of the scientist's claim.

It seemed that the man believed all matter, all life, all energy, everything in the universe, was electricity in various forms. Furthermore the man had proved it.

The paper dealt with molecules, atoms, electrons and protons. Of course old Zulerich knew of these long ago. The marvel was what this man claimed to have done with these tiny components of the universe.

He claimed that, by placing a strip of metal between the electrodes of a machine at Zulerich's right hand and turning a dial upon the table, an electron or proton could be taken or added at will, which would change the metal into any substance desired, according to the formula given.

The book also claimed that the switch upon the panel behind him controlled a current to the tall vacuum tubes and that any substance placed between the electrodes and the switch thrown would have its electrons stuck close to its protons and form an inert mass which Zulerich had once known in theory as a neutron.

Material could thus be shrunk either completely into a neutronic mass or partially, by narrowing the orbit of the electron around its proton. The scientist claimed to have shrunk foot-thick pieces of metal un-

til they seemed to disappear though in truth they were still in existence as infinitesimal particles of the same metal.

A mass of steel weighing sixty million tons, if shrunk until its protons and electrons touched and formed a neutron, would fill a space of no more than a cubic inch.

This all sounded impossible to Zulerich though in reason he could not see why it could not be done if there were as much space between the electron and its proton as he had always believed.

One paragraph particularly interested him. It read:

"My conclusion is that it is quite possible for a properly equipped scientist to now expand or shrink metals at will by narrowing or expanding the orbit of its electrons. At the command of the Imperial Council of Ten I have placed electrodes at equal intervals about the palace as an added precaution in case the people should ever discover the secret code which governs the police and turn them against us.

By switching the current through the knife of the center switch of the panel the palace may be contracted to the size of a drop of water and by reversing the switch expanded again to its present size. One should be careful not to contract fully the orbit of its electrons so as to form the new substance neutron. This shrinking of the palace I have been afraid to try out as yet.

Zulerich was so interested he did not hear the door close behind him. He read the incredible assertions unmindful that Vandyke had entered.

"Come out from back there, old man. You can't hide from me! Every place in the city can be searched through a visoscope!" Vandyke snarled. Zulerich hobbled to his feet and looked over the table.

Vandyke studied him coldly. Zulerich stood and returned the stare but did not say a word.

"You can't die," Vandyke asserted

with a slow deliberate emphasis on each word as he smiled sardonically. "Neither can I, old man. But we can be consumed by heat easily.

"Really it is ungrateful of me to crisp you after you saved me as you did. But you have fool ideas and some day, perhaps when I am asleep, you—well, you might be near the suntower and you might—I don't say you would but you might."

He gave a hissing sound—that strange tongue which controlled the iron men.

FROM down the hall came the sound of lockstep tread marching toward the laboratory.

"What are you going to do?" old Zulerich cried, remembering the power of the sunflame, the shrieking men who had died in the palace, the way they had exploded in the heat. Vandyke did not answer. *Telecops* flung open the door.

Zulerich stood helplessly before the giant square-faced men. Now they were reddened a little by the flame which gave them a grotesque clownlike appearance. Otherwise the intense heat seemed not to have harmed them at all.

They surrounded the table and clutched at him with their six-foot arms outstretched.

As the iron fingers reached after him Zulerich remembered the switch which would shrink the palace to the size of a drop of water. He would be crushed to a jelly, perhaps mangled and left alive forever like the little rat at the museum.

But, he remembered, it would crush Vandyke also and the *telecops* which had set upon him. The armies of iron soldiers in the city had commands to keep the people restrained. Order would be restored and the world would go ahead in peace and productiveness.

Some day when men learned the secret code of the *telecops* they would make the steel men their slaves. Perhaps by that time they would have learned how to govern

themselves. He flung the switch, half doubting whether anything would happen, but it was a last chance.

"Don't!" Vandyke shouted as Zulerich closed the switch and cringed, expecting to feel the walls rushing together to smash him.

But nothing seemed to happen. The *telecops* came on. Vandyke stared out of the big windows and Zulerich, seeing the astonishment upon his face, looked also.

The whole earth beyond the windows seemed to be swelling up. It was inflating like a boy balloon blown by the breath of a lusty boy! Tall buildings swelled to mountain height. The small planes down in the court grew and reached instantaneously above the third story of the palace. Men grew tall as towers and reached far above the palace. Palaces towered up like high hills.

Zulerich, the scientist, marveled at the strange phenomenon of a world popping like a grain of corn. What had happened? Quite suddenly it occurred to him. He was not to be crushed at all. He, Vandyke and the *telecops* were unharmed, shrinking with the palace, growing smaller and smaller, so that the world outside seemed to be puffing up.

The men down in the court seemed to shoot skyward. The nearest man's shoes were all that could be seen of him now. They were much larger than the palace, their laces seemed great cotton cables entering eyelets as large as tunnels. Why, he could not be larger than a flea!

Then the shoes too ran up toward the sky and spread wide toward the horizon. Soon the soles of the shoes were higher than the palace.

FOR a minute he was glad. He and Vandyke were not dead but they could now have no possible influence over the peace and comfort of men. But then he recalled that if the switch were reversed they would grow back to normal again.

He was still in Vandyke's power for the *telecops* were as large and

powerful in proportion to his size as they had ever been. When the shock of the new experience had faded Vandyke would certainly reverse the switch and they would grow back to their old proportions.

He cudgeled his brain for a way out. If he could only crash the tube its power would be broken and they would remain always small.

He reached for a bar of steel which lay upon the table. Vandyke saw his purpose and shouted something to the *telecops*. They leaped forward and caught his struggling arms. His strongest efforts were of no avail. He was like a fly under a man's thumb. Vandyke walked to the switch which would return the palace to its normal size.

"Brave of you, old man," he taunted. "But I am king now—and I, not you, am the Eternal Man!"

Zulerich turned away from the leering triumph in Vandyke's face. He stared out the windows where the earth was quickly growing more and more enormous. He expected to see it begin shrinking back with the reversed current.

There came a jar. It felt as though something which supported the palace had given away.

Darkness shot into the windows. Not a ray of sunshine, not a star or a glow of any kind relieved the gloom. Blackness closed in.

Immediately the automatic lights came on softly against the white walls and glowed until the room was bright as day. They cast a reflection upon the windows.

Rock and dirt shot past, breaking the glass and scattering debris upon the floor. They seemed falling down the length of an unending shaft.

Zulerich knew what had happened. He *knew*!

All the weight of the palace had been contracted within the bulk of a drop of water—thousands of tons of it! The earth's crust was not strong enough to hold it. They were sinking to the earth's center like a bullet dropped into the sea!

By

WILLIAM THURMOND

and

RAY CUMMINGS



They were tranquil,
peaceful in death

The Derelict of Space

Ronald Deely was master of time and space, but the human weaknesses of those around him proved to be his downfall

I FIRST saw the ship from our forward turret window. Around me were the clang of bells, the tramp of feet. But I scarcely heard them as I stared at this derelict we had come upon so suddenly, lying so silent and alone in the trackless infinitude of interstellar space.

Here in this eternity of emptiness, where we had thought ourselves the first humans ever to penetrate, lay the derelict Ship of Doom. It hung no more than a mile away. It resembled, from this viewpoint, an old-time space-ship of the sort which once attempted the Moon journey and failed.

As we approached still closer it

showed itself to be in form like a ball, flattened at its poles so that it had the aspect of a disc. I could not tell at first how large it might be. But Rance was steadily maneuvering us toward it.

I saw at last that it was a coppery metal disc—perhaps a hundred feet in diameter, with an interior height of some thirty feet. A deck encircled its outer rim—a narrow deck of what might have been glassite panes and a row of bullseye windows. And in the center, upon the top of the disc a bulging little conning tower was set.

As we drew forward I saw that the tower was a woven mesh of wire

strands. The disc seemed slowly rotating upon a polar axis so that all its deck windows passed out of line of vision in a silent review. Between two of the bullseyes was a small port.

Rance called "Allerton, see that door! It's partly open! There's no air in the thing! No one can be on it alive!"

I did not answer. Was anyone, dead or alive, within this strange little derelict? It seemed not. No face was at any of the bullseyes. And what was this little thing doing out here? It was not a space-ship. Then how came it here? What human had devised it? And how had he brought it here?

AS THOUGH to answer my unspoken questions, a hand gripped my shoulder. It was old man Dorrance, father of our present commander. At seventy, for all his white hair and the weight of his years, there was not a man among us more capable of coping with the unknown.

"I know what it is! I remember it, forty odd years ago, lad that was before your time! So this was its end."

As he told me I too recalled it by hearsay. Years ago, to an incredulous world, a scientist named Ronald Deely announced that he had found the secret of time-travel. He had procured funds and built his little vehicle—this same disc-like vehicle which now lay so strangely inert before us.

Old Dorrance poured out the tale. There were Deely and his wife Hilda—and the commander, one Gerald Vane. With three other men these dabblers in the unknown had entered their burnished disc for a time-flight fifty years into the future.

Ten thousand people—old Dorrance had been one of them—breathlessly stood and watched this disc depart. The current went into it. The thing hummed. The solid, burnished coppery shape grew tenuous. An instant and it was a wraith—the shimmering ghost of a disc.

Then it was gone, speeding forward into time.

Yet the time-traveling disc was not equipped to move in space. The concrete platform where it rested, to the eye of the beholder seemed empty when it departed. For that *time* it *was* empty. The disc presumably had gone fifty years ahead—yet it should have remained upon its platform. Then why was the disc hanging out here now in space, billions of miles from the Earth?

A group of our men were around us. Young Dorrance said, "No air in it! We'll go aboard."

Somebody else exclaimed, "So it's the Deely time-ship? Out here—"

"And if any of you men want to go aboard with me, get into your pressure suits. We'll see what's there—" Young Dorrance's voice faded as he dashed from our turret.

"Wait!" said old Dorrance. "I know why it's here."

While he told me his theory Rance's brother was assembling our pressure suits.

The Deely time-ship had gone fifty years into the future. But Ronald Deely, coping thus with nature, had failed to make adjustments of time with space. His little ship, once in the stream of time, plunging forward, became wholly disconnected from the Earth. And the Earth is not at rest in space but swiftly moving. It follows our Sun, which in turn is drifting—and all the stars, all the Universe plunges—somewhere.

Deely had either overlooked this or had been unable to make the necessary adjustments. His ship was whirled away into the infinity of interstellar space, fifty years ahead of the motion of our solar system—to await the arrival of our little planet to make a space and time contact.

This then was where the Earth would be in some ten years more. I stared at the Ship of Doom with new amazement. It rotated very slowly on its vertical axis. Was that not

perhaps a mere visual illusion. Perhaps all the firmament was endowed with that slow spin.

Was this derelict drifting back home—or was the Earth merely approaching their predestined meeting place? As I envisaged this comingling of time and space, it seemed to me that here might be the secret of gravity itself. And as I stared at the Ship of Doom I saw in it suddenly *absolute rest*. In all the great starry Universe was this little time-ship the only thing unmoving—a pivot around which flowed the ceaseless changes of the cosmos?

"Perhaps that is so," old Man Dorrance was saying. "So many things we think we know and find we know nothing. Yes, I want my pressure suit! Do you think the old man is likely to sit here doing nothing?"

Four of us went aboard the Ship of Doom. The silence and the motionlessness hung like a spell upon it. We could sense that death was here.

YOUNG DORRANCE was first to step the small yawning gap between the two ships. His bloated gloved hand seized the partly open door and drew it aside. We crowded forward with the dim starlit little deck of the Ship of Doom curving before us.

A few small metal chairs stood neatly in a row. The curving deck was four feet wide and twice as high. A nearby inner door to the circular interior was closed. Nothing here.

But as I turned from this instant glance I saw slumped on the deck a human form—a man, hunched forward with his arms wrapped around his updrawn knees.

"Dead!" said the voice of old Dorrance in my ear. "Dead, of course, these many years—body marvelously preserved. I remember him. Brown, the mechanic. I had a talk with him once."

He sat here by the opened outer

door, as though he were on guard. Or perhaps watching the rush of air as it went out. His attitude seemed so calm, so resigned—philosophically watching death stalk him.

The body fell forward to the deck as my companions pulled at it like prowling ghouls. He was a man about thirty. A rough-hewn, good-natured face, now puffed up—bulging blue eyes.

But there were others on this Ship of Doom. The central portion of the circular disc was divided into two horizontal floors with several rooms on each. It was a dark and silent interior of woven metal grid-work and metal furnishings.

The rooms were segments of a circle like a pie cut into quarters. Four on the lower tier—a little circular stairway leading upward to four other chambers—a circular ladder into the upper tower. On the lower tier were the mechanism and control rooms, a storeroom of food and a sort of general lounge. The sleeping rooms were upstairs. In the tower were the observation instruments.

I gave little thought to these details. It was the dead which fascinated me.

We chanced to enter first the room where the food was stored. Here was evidence of strife! On the floor lay another man's body. Under our lights his head and face showed gruesome where some heavy instrument had smashed it with a murderous blow.

Four other human bodies were on the ship—all of them in the lounge.

Upon a chair, with a small table before him, a young man sat slumped over a notebook and pencil as though he had been assiduously writing almost to the last. A handsome young fellow, with sensitive features—the face of a dreamer. Above the almost girlish face was a shock of waving black hair.

I gazed at the notebook in which he had been writing, its cover was inscribed:

THE CHRONICLE OF
PHILIP THOMASSON

Old Dorrance touched me. "He had more money than was good for him. Only thing he ever did in life was finance Deely. And Hilda Deely was mad with passion—but not for her husband. Everybody knew it—except the husband. That's Hilda Deely over there—look at her!"

Strange contrasts! Thomasson sat so calmly. But across the lounge lay the body of a man who had not had the courage to die. His hands were tearing at his throat. An agony of terror was on his face. His thick tongue protruded.

There were two others—a man and a woman. The woman was young and slim and very beautiful, with a mouth made for love and eyes which even in death seemed to hold love like a torch to burn eternally.

This was Hilda Deely. She lay on a couch wrapped in a man's arms, with the long tresses of her black hair falling disheveled to envelope them both, and his arms protectingly holding her. Together, never to be separated, death had come to these two.

But what had happened? There is what we saw on the ship to guide me. And Thomasson's *Chronicle*, which he seems to have penned until almost the last. And there is my own fancy. Weaving what we saw, CHRONICLE and fancy together, we emerge with the narrative that follows—perhaps not literally factual but inevitably close to what actually occurred on the Ship of Doom—

THE moment of departure was at hand. In the lower mechanism room of the Deely time-vehicle Brown the mechanic sat at his controls. Outside his glassite window he could see the awed and excited crowd which had assembled to witness the departure. But Brown wasn't interested in the crowd.

The throng was cheering, gazing

up at the tower of the time-vehicle. Brown knew that Professor Deely and his wife were up there with Gerald Vane, commander of this time-flight. Vane grinned ironically to himself. Deely was a fool to bring his wife this close to a man like Gerald Vane.

At that moment Hilda Deely and her husband were in the tower, answering the plaudits of the crowd.

Deely's arm went around his wife. He was a frail studious-looking man of forty. His shock of prematurely grey hair made him seem older. He was an unworldly fellow. He sought for so many long hours each day to delve into the mysteries of Nature that the beauty of his young wife and her love for him became things he took for granted. Her inner life, her desires—the myriad illusions upon which a woman builds romance—all were mysteries of Nature to which Deely gave never a thought.

"Isn't it wonderful, Hilda?" he repeated. "Listen to them cheering us. This is the happiest moment of my life."

He did not notice that she involuntarily drew away from his encircling arm. Gerald Vane stood close behind them, darkly handsome, his broad athletic shoulders trim in the uniform and gold braid. Whatever his inner character, outwardly Gerald Vane was the sort of man upon which a woman may build her dreams.

The earnest tremblingly happy Ronald Deely did not notice that his wife's free hand went behind her so that Vane gripped her hand and briefly held it with a tender pressure while between them passed unspoken a reassurance of their love.

"Well," said Vane, "we're getting the publicity, Deely. Every newscaster in the world is covering this. Let's get started. This is a good dramatic time. Close that port."

"Yes, we'll start now. There will be a starting shock, Hilda. Don't be afraid—I'll hold you."

Vane closed the ports. In effect

the little vehicle was a spaceship now, almost capable of withstanding an outer vacuum.

"Ready?"

"Yes!" Deely did not see the look which passed between his wife and Vane. For them this was a moment of crisis also, a moment of triumph. They would fling themselves out into the future. And in that world of the future she and Gerald would escape from the ship—together.

Gerald Vane pulled a lever. Down in the lower control room the phlegmatic Brown calmly and efficiently responded. The little vehicle glowed and hummed, was flung into time.

In the lower lounge two other men sat, gripping their seats against the shock of starting.

"You all right, Thomasson?"

"Yes, I'm still here!"

"My God! Where are we?"

Phil Thomasson half rose out of his chair, sank dizzily back. The ports of the lounge-room showed a grey luminous blur. The door to the little deck stood open but nothing could be seen save the reflected glow of a small deck light.

William Mink repeated, "Where are we?"

Thomasson smiled. "Just passing through day after tomorrow, I fancy."

It was romance to young Phil Thomasson. He knew nothing of the science of it, nor cared. With his inherited money he had financed all this as an adventure.

To the perspiring, frightened William Mink it was an adventure also. Mink was a thick-set, paunchy man of fifty. At forty he had thought to conquer the financial world. Now, at fifty, he was a pauper. His banks had failed and shattered his mind.

Mink was a good friend of Gerald Vane. He had indeed, upon many occasions loaned Vane money. He would have financed this Deely expedition had not his fortunes crashed and Phil Thomasson come forward and financed it instead.

Mink was here as an escape from

his troubles. But Mink had also another idea. There were secrets in the future which he could learn. Secrets which, when he brought them back, would speedily make him rich again. But now he was terrified. Thomasson gazed at him with a sarcastic smile. "You're not much of an adventurer, are you? Brace up, Mink! We're still alive. That's a triumph, anyway."

REALIZATION of what the destiny of the flight might be came with a shock. Deely indeed, had thought of it as a possibility but hoped it would not come to pass. The realization that while they were whirling through Time, they were also hurtling through Space, brought to each of them a dilemma. Their secret plans were awry. *The vehicle had actually separated from the Earth.*

To Phil Thomasson it was less of a disappointment. He had thought to observe the follies of future generations and be amused. But after all it was amusing also to see the crazy swaying stars.

It was a blurred crazy Universe endowed optically with strange motion. The sun was drawing away. Saturn with his brilliant rings was coming forward.

"Don't you realize, my friends," Deely said vehemently. "We're explorers into the unknown of space and time. You think we're moving? We're not. This vehicle of ours has found absolute rest. We are in the future now. This is where the Earth will be at this time which we have already reached. And we are going fifty years into the future! What realms of starry space we will see—no man has ever penetrated those realms."

"A space trip!" murmured Thomasson. "We start for a time-trip and it turns out to be a voyage among the stars!"

"And what a trip," exclaimed Deely. "Think of it—"

Thomasson smiled ironically. "I

am thinking of it. We can't gaze into the future of our earth! The future has always been hidden from us, it always will be."

"We're in no danger then," stammered Mink.

"Of course not," Deely reassured. "My time mechanisms are working perfectly. I have conquered the secret of time. When we return—think what new facts we will have to add to science."

"Well," said Brown, "if everything's all right I better get back to work."

He tamped out his pipe and clambered down the ladder. "Chief," he called, "if Mrs. Deely needs any help gettin' lunch I'm ready any time."

"Hungry," said Deely, "of course we all must be hungry. Hilda dear, you go down and start things. I must stay here and make notes."

"Yes. Yes, Ronald."

"I'll help her," said Vane."

They descended the ladder and he turned suddenly in the empty lounge and flung his arms around her. "Hilda!"

"Gerald, not so loud!"

They snatched another moment of madness. Or ecstasy? Or love? To Hilda, it was all of those.

And so the strange journey went on. They went fifty years from their starting point—then sixty years. The journey consumed days of their life. And then Deely reversed the mechanism, retrograding through time so that all the universe was adjusting itself.

Deely's mechanisms worked perfectly. For him it was a triumph. The dials recorded the passage of absolute time. Sixty years forward. With a larger, more powerful, vehicle the time transition could be greatly accelerated.

BUT Deely, with the precision of a true scientist, was heading back for a landing upon Earth. The time the voyagers had experienced would be about two weeks. And Deely knew that the laws of nature

—unnamable laws, but inexorable—would allow him successfully to land at a point of time on earth two weeks *after* his departure.

Deely was a careful man. No amount of enthusiasm now led him to want to take unnecessary chances. Two weeks was long enough for them to chance upon this voyage. And the batteries too, were safely adequate for no longer an operation than that.

It was just after they had passed the point at which they were still fifty years ahead of earth when Fate dealt to Deely a blow terrible, crushing—and yet perhaps merciful.

Gerald Vane and Hilda had been alone so much during the outward trip that Vane—playing always for safety—forgot his creed. Brown was generally in the lower mechanism room. Mink was always brooding and morose. Thomasson was gay when there was anyone to listen or immersed in an interminable chronicle for own amusement. And Deely slept, ate and worked upon his scientific data.

It left Hilda and Vane with many stolen hours. And then came the moment of the return flight when Deely received his crushing blow.

One night he found himself strangely wakeful. The problem on which he had been working after supper was unfinished and now the solution—seemed ready.

He slipped from his bed, into slippers and outer robe and left the small triangular room. It was glowing with the strange iridescence of the time-current. The upper tier of the small vehicle with its four cabins, had a narrow corridor bisecting it like a diameter line.

Deely, in his grey cloth gown and his rumpled white hair, moved along the corridor toward the spiral ladder leading to the tower, where he knew Phil Thomasson would be on watch. He mounted the ladder. He might have heard soft voices from one of the rooms off the corridor had he stopped to listen but he did not.

Thomasson greeted him. "Well, Deely, shouldn't you be asleep?"

"I woke up with that accursed problem tormenting me. Stay where you are, Phil—I'll sit here. Or would you rather go to bed?"

"I'll stay," said Thomasson. "What is sleep to me? I've been watching those crazy lurching stars."

But Deely was already immersed in his formulae, with Thomasson watching him thoughtfully. A nice fellow, this Deely. Too impractical for a hard world of reality.

It seemed to Thomasson that there was a sudden stillness about the vehicle. Voices in a soft murmur came floating up the ladder to the tower room.

"Gerald dear, I must go—if he should awaken—"

"Nonsense, Hilda. You know he sleeps for hours."

"Gerald, please— Kiss me once more. Hold me close."

There seemed a strange blankness on Deely's face. And slowly the blood drained so that he was white to the lips.

"I say—" began Thomasson. But Deely's vague gesture silenced him. The murmuring ceased momentarily. There was an interval while Deely stared blankly with his pencil still poised over the paper. Then Deely was fumbling with his chair, trying to rise to his feet.

Thomasson found his voice. "Where are you going?"

"Downstairs."

"I wouldn't do that." He put a hand on Deely's thin shoulder. "Take it easy, old fellow. Give it thought. Don't go down there now."

Deely sank back. "I guess you're right."

FOR minutes Deely sat staring. His pale blue eyes stared through the metal walls of the little tower. Then at last they focused upon Thomasson.

"You knew this thing?"

"Yes. I knew it."

"And Mink—he knew it?"

"I suppose so."

"And even Brown?"

"But, Deely, look here—"

"And now I know it—at last. You'll go down to bed now, won't you, Thomasson?" It was a gentle plea. "I want to stay here alone—to give it thought."

Thomasson was glad to escape.

Deely's gentle white face was blank as Thomasson went down the ladder. The sleeping rooms were quiet. Thomasson, seeking his own, peered into the opened door-oval of Deely's as he passed it. Hilda lay there on her own couch, apparently asleep. Thomasson sighed, entered his own room and drifted into uneasy slumber.

A sudden lurching shock awakened him. Something was wrong with the ship. The time-mechanism was not operating!

As he gained his feet Thomasson heard the distant shouts of his companions. In the corridor he ran into Hilda, a white specter in her long filmy nightrobe.

"Mr. Thomasson? What's wrong. Where is Ronald? I woke up—"

Gerald Vane dashed toward them. "Where is Deely? What happened?" Vane was as white as the woman.

In a nearby door-oval Mink appeared. "What is it? Are we in danger, Vane?" He clutched at the door casement. "In danger . . ."

From the lower tier Brown was shouting, "It's gone dead! Everything's off! What'll I do?"

Vane rushed toward the tower ladder. Slowly the figure of Deely came down. His voice was calm.

"Don't get excited. I stopped our time-flight."

Brown arrived. "But Professor, the controls—"

"What matter, Brown? Come to the lounge, all of you. I want to show you the stars through the window there." His gaze went to his wife. "Ah, Hilda—have you slept well?"

"Look here," shouted Vane. "Stopped our time flight? Why?"

In Deely's mild eyes a sudden fire

shone. "Do as I tell you, Vane. All of you—come down to the lounge. Stop that sniveling, Mink. Hilda, you go ahead with Gerald. Don't let her fall, Vane."

The vehicle was at rest, poised in the void of infinite space. Through the windows they could all see the motionless firmament, freed now from the distortion of their time flight—a vast bowl of black velvet and everywhere the motionless blazing worlds.

Brown found his voice. "We can't stop here like this! We have no air or water! We'll certainly all be killed."

Vane gasped, "Start the mechanism, Brown."

"But I can't! Nothin' works!"

Vane turned upon Deely. "What have you done?"

Deely faced them with even greater calmness. "I thought it would be a wise thing to smash the mechanism. I have no need of it any longer."

"Death!" Only Mink could find voice.

Gerald Vane stared with dumb amazement, then leaped upon Deely. "Wrecked us? You—"

"It was you who wrecked us." Deely sat down on the couch, with pale eyes surveying them all. "You and the woman wrecked us. All of you saw it—all but me, and no one bothered to tell me. Go to him, Hilda. There's nothing to stop you now."

But she only stood staring. Mink, still screaming, rushed away. Brown, cursing to himself, dashed for his control room. Vane whirled. "You—crazy—fool!"

"Hold her in your arms, Vane. Don't you see she's frightened?"

Thomasson gasped. "Hadn't we better try to repair the controls?"

"No use," Deely interrupted. "You can't repair it. Our air is leaking out. We've a few hours—two or three. Hilda, I shouldn't waste time if I were you. A few hours isn't very long for loving."

She swayed toward Vane but his terrified glare and his words stopped her. "You brought this on me! You rotten little—" Vane staggered from the room.

But Deely said, "Come back, Thomasson! Don't bother. Sit down, Hilda—it's too bad if you're going to lack the comfort of his love at the end—but I guess you are."

IT BLURRED for a moment to Thomasson's shocked senses. He heard, vaguely, the running footsteps of Vane and Brown as they dashed around the ship, trying to accomplish the impossible.

Thomasson stared across the starlit lounge at Deely and his wife. They sat gazing numbly at each other. All of them were mad. Perhaps they were all their real selves for the first time since childhood.

Thomasson was aware of the shouts of Vane and Brown—thudding blows of metal against metal—then a horrible agonized death-scream from Mink. . . .

"He's locked himself in the food room!" Vane gasped. "Brown, get him out of there!"

They stood by the closed metal door. Mink was inside. They could hear him babbling to himself.

"All this for me. Nobody can have any of it but me. Food and drink—that's life. Nobody can die with all this food and drink."

Vane's fist thudded against the door. "Mink, open here!"

Brown shouted, "Open this door!" But there was only silence.

Vane pounded harder. The door resounded with the blows of the heavy iron wrench Brown was carrying, suddenly went inward as the water casks and boxes which were piled against it were shoved backward. Over the litter, Vane and Brown tumbled forward. The dark triangular room was scattered with broken boxes of food, wet with spilled water.

As Vane recovered his balance the frenzied Mink was on him, clawing

at him, gouging at his eyes. Vane stumbled and fell. Brown raised his heavy wrench and crashed it upon Mink's head. Vane lifted himself from the gruesome thing on top of him. "Did it, Brown! He's dead—what of it? We've saved the food and water."

But Brown stammered, "That—looks awful. The brains—that—" "Come outside."

They stumbled to the corridor. Brown found himself still holding the wrench. He dropped it with a shudder. He wavered away, muttering to himself. Vane dashed to the lounge, gasped, "Mink went crazy. Wrecked our storeroom—Brown killed him with a wrench. Stark, raving mad—the fool."

DEELY barely moved. "Sit down, Vane. Close that door first. You're wise to come in here—this is the best place. We can hold the air a little longer in here."

Thomasson could feel that the air was going. His head was humming—or was the roar in his ears?

Vane slammed the door. "I don't want to die! Deely, can't you do something?"

"Nothing now," Deely said calmly.

Vane whimpered like a child. "Hilda, tell him to fix it. Tell him, Hilda." But Hilda Deely only stared. It seemed to the watching Thomasson that there was a faint smile on her lips.

"You'd better sit down," Deely said. "Save your strength—the air is getting very thin."

At that moment the air began escaping still faster. Brown, clinging to a chair on the curved starlit deck-corridor could hear the silence broken by the faint hiss and whine of the air as it went out.

He found himself sitting on the deck by the small outer port. Mink was dead. Soon the others would be dead. From inside he could hear the whimpering Gerald Vane. "I don't want to die! Deely, please—" But he was going to die.

Brown thought again how much better it would be to die all at once. He found the port lever beside him. His hand slowly pulled at the lever. The door slid partly open. The rush of wind as the deck-air went out seemed like a graceful summer breeze. And then a gale.

Brown's head slumped down on his updrawn knees. He was dead. . . .

Deely gazed across the lounge toward the closed corridor door. "Going fast now. Something outside must have broken."

Vane collapsed in a chair, whimpering, then he began screaming, "Stop it! I don't want to die!"

Thomasson thought it foolish to rail like that. Vane was a pitiable object. He looked stricken of all his manhood now.

On the couch Deely himself was gasping. "Hilda—in a moment—we'll be gone."

"I know." She tried to rise but the room must have whirled before her. "Ronald! Where are you?"

She wavered, with hands outstretched, across the few feet that separated them. And on the couch his eager arms caught her.

"Hilda!"

"If only you could forgive me, Ronald."

"I do! I do, Hilda!"

The roaring in Thomasson's head drowned their murmured words.

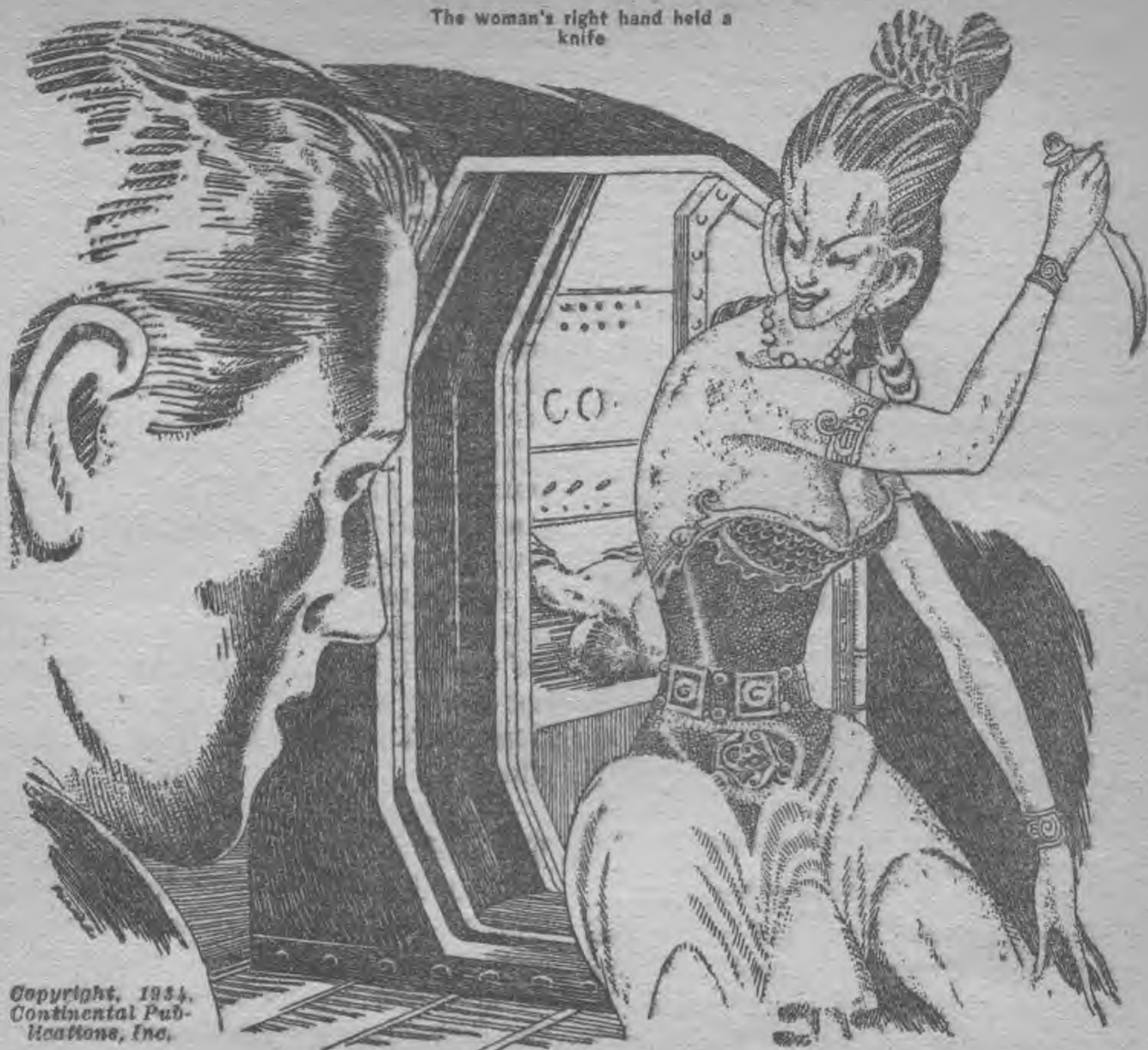
Vane's dead body seemed hideous, there in the chair. But on the couch Deely and Hilda were lying together, wrapped in each other's arms. They were tranquil, peaceful in death.

It blurred swiftly before Thomasson's fading senses—and then it slid away into a great silence. . . .

Thus we found them, their frozen bodies preserved through the years.

We did not attempt to take the Deely time-ship back to earth. We left it there with its six passengers untouched. As young Dorrance turned us back and set out course toward earth, I was at a rear turret window. I watched until it was lost among the blazing stars.

The woman's right hand held a knife



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The Moon Devils

Luna was considered a dead world until the surprising message from the first expedition to get there safely sent back a far different—and much deadlier—story!

THE secretary of the Lunar Archeological Society approached his employer with a nervous diffidence. The president was a man who hated circumlocution. He became testy.

"Come on, man. What's the trouble? Out with it."

Still the secretary hesitated. Then, with sudden decision, he thrust a packet of papers clumsily toward

his chief: "These came this morning, sir. I thought you ought to know. They're a bit—er—peculiar."

"All right. I'll look at 'em."

The secretary departed with some relief and the president turned back to his interrupted work. Half an hour later he remembered the pile of papers and took up the covering letter which lay on top. A name standing out amid the type caught

By **JOHN BEYNON HARRIS**

his eye. He stiffened, stared at it, began to read more carefully. The heading was a Liverpool address, the date a fortnight old.

"Dear Sir,

"On the sixteenth of June last the S.S. *Turkoman*, to which I was medical officer, rescued a man at a point not far from the Solomon Islands. He was found drifting in a native canoe and, judging from his condition, had been in it for some days. The results of such exposure were aggravated by the serious ill-treatment he had received in the form of severe cuts and wounds.

At first it appeared to be impossible to save him but his body eventually responded to treatment though his mind still wandered. He was a man of considerable education and gave his name as Stephen Dawcott. Upon arrival here I placed him in a mental home.

During the next four months I was absent and when I returned it was to find that he had made good his escape. The authorities were mystified and handed to me the enclosed manuscript, which he had left behind. They saw it as the raving of a madman but to me it seems a matter requiring a less facile explanation. I await your reply with interest.

John Haddon, M. D.

The president frowned as he set aside the letter and took up the manuscript. There had been a Stephen Dawcott, an anthropologist of some note, aboard the *Scintilla*. But the *Scintilla* was lost.

From the day she had left the flying field on her maiden trip to the moon nearly a year ago, not a word had been heard from her. She had roared from Earth into mysterious non-existence. But Stephen Dawcott had been aboard her—he was sure of that.

He and others of the Lunar Archeological Society had seen Dawcott's among the faces at the windows before the *Scintilla* took off. And now the man was reported as picked up in Melanesia, of all unlikely places. The president's frown deepened as he began to read the manuscript:

* * * * *

The *Scintilla* behaved in an exemplary manner on her outward journey. She justified the high hopes of her designers by the smooth swiftness with which she leapt out from Earth. Captain Toft was delighted

with her performance and swore that there could be no sweeter ship to handle in all the ether.

In design, furnishing, and facilities for carrying such fragile relics as we might find the *Scintilla* was a credit to the Lunar Archeological Society, who had built and so lavishly equipped her. The perfect start, followed by the peaceful smoothness of our voyage could have raised no apprehensions in the most psychic soul.

The silver globe before us was worn out, arid and still with the supreme stillness of death. No ship cruising above that gutted shell of a world had seen sign of as much life as lies in a blade of grass. But we did not know Luna then. We did not know to the full that desperation with which life strives and clings.

WE MADE first for the north-east quadrant and sank to a gentle landing on the glittering metallic dust which makes the crater of Aristarchus the brightest spot on the face of the moon. This was to be a preliminary trip. Our object was to survey the ground for future operations rather than make them ourselves.

The details of our trip are of little interest here, so I merely record that we moved next, unprofitably, to the Mare Crisium and thence across the equator to Tycho. Next Clavius, greatest of all the craters, provided quantities of material and showed indisputably that a great civilization had once flourished in what is now only a vast bowl of sand and rock, a hundred and forty miles in diameter.

Thus we came at last to the Mare Serenitatis, the Sea of Serenity.

Who named this immense oval plain? I cannot remember, but I do know that he saw it only through a telescope, two hundred and thirty-nine thousand miles away. He did not see it as we did—a huge sterile stretch, grey-floored and gloomy. Had he been able to stand upon one

of the tortured mountains at its brink and look out across that somber desolation of sand, he would have called it not the Sea of Serenity but Sea of Foreboding.

We sailed slowly across to the northwest. Every member of the expedition was at the windows scanning the featureless floor for any sign the ancient Lunarians might have left. Until now we had felt no uneasiness. All the moon is bare but the harshness of its vistas had not played upon our nerves.

And then, less than twenty miles from the far side of the sea, the firing tubes began to stutter uncertainly. I was with Captain Toft when the chief engineer rang through and reported that it would be necessary to descend for repairs. The hasty glance which Toft gave through the control dome windows told me that he had conceived the same distaste for the locality as had the rest of us. He decided swiftly to make for the cliffs now looming ahead at the sea's edge.

The *Scintilla* continued to forge lamely ahead, gradually sinking. She took the sand at length some two hundred yards from those high perpendicular cliffs which once had stood like the ramparts of giants against a beating sea.

The captain left the dome to interview the engineer and I made my way to the central saloon. A deal of chatter greeted me as I opened the door. My colleagues were peering excitedly at the cliffs—all signs of their depression had vanished. Robson, the leader of the scientific side of the expedition, drew me forward and thrust a pair of field glasses into my hands.

"Look at those cliffs, man—just look at them."

I focused eagerly. The sand in the immediate foreground was dotted with rocks of all sizes which had fallen from the heights. Beyond them was a line of darkness, which hid the cliff-face in deep shadow. The meager reflected light was just

enough to show regular markings of some kind. I fancied that I could make out the carved figure of a man.

"Wait a minute," cried Robson as he turned and dashed from the room.

A moment later a searchlight was playing a flood of brilliance onto a scene which caused us to gasp incredulously. The surface of the granite-like rock, to the height of some seventy or eighty feet, was covered with carvings in high relief—an involved, ingenious ordering of the figures of men, animals and conventional forms.

The first astonished silence was succeeded by a babel of excited talk. Everyone spoke at once, and no one listened. It seemed that we might have found the lunar Book of the Dead carved upon this mighty stone page.

ROBSON came back to tow me in the direction of the space-suit lockers. He continued to babble excitedly as he lifted the clumsy garments from their hooks. The suits were essential, though contrary to expectation it had been found that some air still existed upon the moon and in the deepest craters was almost breathable during the lunar day.

As we left the ship and drew near the cliffs there was no doubt in any of our minds that the design was picture-writing of some kind. The irregular repetition of certain glyphs practically established the fact. None of us, of course, could yet attempt any translation but the photographers were already arranging their cameras to provide a record for more leisured study.

It was Robson who made the great find. He had gone close to the cliff to examine a florid incised square of the surface. Presently his cry sounded in all our receivers:

"A door," he said. "There's a door in the cliff."

We crowded up to him and found that the square was bordered by a narrow crack. Millennia ago, when there had been a wind upon the

moon, the grey sand had drifted up at the foot but it took only a few moments' scratching to lay bare the threshold of the stone panel.

Already, at the ruins in Clavius, we had established that the lunar practise had been to swing a door upon a central pivot so that it turned sidewise through ninety degrees, leaving a passage to either side. Accordingly, Robson flung himself upon one side and pushed.

Finding it immovable, he transferred his strength to the other. It moved back an inch or so then stuck. Spurred on, he brought every ounce of his strength to bear and slowly the great rock door which would have defied the efforts of three men on Earth, swung around. Without hesitation, he switched on the light at his belt and walked in. We followed.

"Another door," he complained irritably. "They certainly meant to preserve whatever's inside. Let's have some more light on this."

The second door was plainer than the outer and the only sign on it was a deep-craven circle. As I looked at that circle, my premonitions began. The circle—the worldwide sign of infinity, eternity—could it be possible that here, on Luna. . . ? I almost called upon the others to stop.

"It's sealed," some one said. He pointed to a dozen or more blobs of black shiny composition fixed across the jambs. On each of these was impressed the sign of the circle.

To the non-anthropologist it may seem strange that I should have attached an Earthly importance to the sign of the circle on the moon. But it is, with the possible exception of the cross, the earliest and most widely used of symbols.

It had dominated the lives of many races and now here it was again—on the moon!

I stood unhappily aside and watched the rest break the seals. But the door still refused to yield, even to the efforts of five men. They drew their knives and fell to scrap-

ing out a tight-plugged paste around the edges. They tried again but still the stone square stood adamant. Robson suggested a small charge of explosive.

"The door has no value," he pointed out. "There's no carving on it except the circle."

The rest agreed. Ten minutes later the face of the door was cracked across and a crowbar was levering the fragment apart. The barrier soon succumbed and we scrambled over the ruins to arrive in a large hewn room.

Here and there, black openings in the walls suggested corridors to further rooms but we gave them little attention. Our interest was centered in a scatter of long boxes lying on the floor.

They were of some grey metal which reflected the rays of our lamps only dully. One, close by the door, had suffered from the explosion. The lid was loosened and lay awry. Through the space thus opened hung a human hand.

Robson laid hold of the battered edge and wrenched the lid clean away. As his eyes fell on the contents, he started back in surprise. We hurried to his side and stared down in astonishment — men of Earth, looking for the first time upon a man of the moon!

He was perfectly preserved and we, poor fools, wondered at the artistry which had been able so to conserve an unshrouded corpse that after thousands—perhaps millions—of years it appeared to have lived but yesterday. No one guessed the truth about that body. We were sufficiently conceited to believe that no race could have surpassed us in any branch of knowledge.

WHEN we returned to the *Scintilla* for rest and replenishment of our oxygen supplies, Captain Toft greeted us with the information that the wear in our firing tubes was more extensive than had been suspected. It would take, he thought,

nearly twenty-four hours to effect replacements.

The delay irritated him, for he had meant to follow daylight around the moon to the invisible side. But we did not share his anxiety to be off. Indeed we welcomed the delay, for it gave us some time for investigation.

A dozen specimen coffins were loaded aboard the *Scintilla* after we had opened them to assure ourselves that they contained the bodies of six men and six women. With these safely stowed away we felt at liberty to examine the vault further.

There was little to repay detailed investigation of the place itself. No carving or decoration graced the interior but we found that it and the subsidiary chambers contained a surprising quantity of coffins—together more than four hundred. Each one, when opened, revealed a puzzling device whose purpose we could not guess.

As the lid was raised on its hinges two secondary occurrences took place. At the first loosening of the catches something inside dropped with a musical tinkle. Investigation revealed the fragments of a small glass globe, smashed to pieces.

Then the actual pushing up of the lid thrust, by means of an ingenious arrangement of levers, a slender hollow glass spike deep into the corpse's flank. This was automatically withdrawn as the lid passed the perpendicular. Robson and I examined the device curiously, but could make nothing of it.

Many of the coffins enclosed not only trinkets and trappings but also sheets of withered writing material covered with a quasi-pictorial script. This obviously must be collected but since prolonged work in space-suits is inadvisable we made an arrangement of shifts. My turn came some six hours before sunset and my companions were Jay Royden and Walter Greg, both good men.

The three of us were soon scrambling once more into the hewn

tomb. For an hour or more we worked quietly. Necklaces, bangles, daggers and rings, which would soon be proudly shown in the museums of Earth, were methodically stripped from their owners' still forms. The Lunarians, it seemed, did not know clothes as we do. What little they wore was not for covering but for ornament in the way of worked belts intricate breastplates and the like.

Soon our miscellaneous collection began to form a sizable pile and I decided it would be more convenient to remove it from the chamber where we were working to a spot nearer the main entrance. Two journeys were necessary and as I made the second I came upon a sight which brought me up with a jerk.

One of the coffins by my way lay open and the inmate's hand rested on the edge.

I stared in horror. It had not lain so during my previous journey. I hurried past with thumping heart. I dropped my burden with the other plunder and turned to scan the vault with growing panic. Something seemed to flicker just beyond the rays of my lamp. I jerked stiffly towards it but the light showed nothing amiss. I turned on, scouring the place with my lamp. Nothing—nothing . . .

Then I looked back to the first corner. My arms fell weakly; my heart hammered in panic.

A corpse sat upright in its coffin.

I must have cried out, for I heard Walter's voice in my receiver. "What is it?" he called anxiously.

"Come here, quick," was all I could manage.

The urgency in my voice started them without further question. I stood with my back to the main entrance and turned my light on the passage-mouth from which they must emerge. Something moved again outside the circle of light but I dared not throw the rays upon it. The two grotesque space-suit-clad figures came hurrying into sight.

As they saw me Walter demanded

again, "What is it?"

I did not answer him. Instead I shouted: "Look out!" A dimly seen shape was moving in the shadow behind them.

Walter snatched at his knife and made to turn but swift as he was he was too late. A naked brown arm came snaking over his shoulder. Its elbow crooked under the front of his helmet and it groped for his knife.

Even as Jay turned to help, another pair of brown arms came twining about him and I had a glimpse of a slant-eyed face leering beyond. The hand which sought Walter's knife tore it from his grasp. I could hear him grunt as he struggled to keep it. Then, clearly through the microphone, came a tearing as the knife ripped the space-suit and the following whistle of exhaling air. Walter gave one choking cry . . .

The whole affair had been too sudden for me to give any help. Before I could take more than a step I heard a second tearing sound and knew that Jay too was past help. Then I saw that the corpse which had caused my fright was no longer sitting—he was climbing out of his coffin, his face leering towards me.

I turned and sprang for the open, racing for my life across the sea bottom.

THEY didn't believe it. Already I had shown signs of queer behavior and now I was babbling fantastic nonsense. Dead men coming to life! Dead men fighting the living! Obviously my brain was turned. The doctor attempted to soothe me. Robson vainly attempted to reach Walter and Jay on the radio. There was an odd expression on his face when he turned back to look at me.

"Can't raise them," he said. "Something's certainly wrong. Do you think—?" He broke off and nodded suggestively towards me.

The rest looked serious. They did not put their thoughts into words

but they were plain enough on their faces. Three men alone—and one of them a madman!

Two volunteered to go out and search. The rest began to help them into their space-suits. I begged and besought them not to go but they only cursed me for getting in their way. Others dragged me back and held me penned in a corner.

"You fools," I raged. "Wouldn't they have called you if I'd run amok? If you go over there they'll get you!"

Nobody gave me a scrap of attention. The men were clad and their helmets affixed. My anger passed as I helplessly watched them trudge towards the searchlit cliff face. Nothing I could do would save them now. Then they disappeared. For a few seconds there was nothing but the sound of breathing. Suddenly a voice with a tinge of nervousness spoke.

"What was that? Something moved."

"Nothing," answered the other. For our benefit he added, "We are just climbing over the remains of the second door. Now we're in the vault. There's—what's that?" His voice was suddenly shrill, then it broke. "Quick, out of this, quick man! Back, for heaven's sake!"

After that it was a jumble—hard breathing mingled with odd phrases. Then, "Look out, he's got a knife!" Horror-stricken, we heard the sound of stout cloth ripped asunder—gasp- ing cries. After that, all was silent.

My companions turned shame-faced wondering eyes upon me. Robson murmured something which might have been an apology. He begged for the whole story. I told him as calmly as I could all that I knew. He found it meager.

"Have you any theories?" he demanded.

"You remember what happened when we opened the coffins? A globe of something dropped and smashed. Then, too, there were those glass needles. There must have been a purpose behind them."

Robson looked hard at me. "You mean that the needles might have been some kind of hypodermic?"

"Something of the sort," I nodded.

"And that they revived what we thought were corpses?"

"There were the glass globes, too." I reminded him.

"But it's ridiculous. After thousands of years! There might be a possibility of suspended animation for a short time, but this—"

"Why should it be impossible for an indefinite length of time? The fact that we don't know how to do it doesn't prove its impossibility. Those coffins were airtight. They may have been full of preserving gas for all we know. We couldn't notice that while we were wearing space-suits."

Robson turned to contemplate the cliff. "But why?" he murmured. "Why?"

"Why do men put up memorials?" I asked. "It's a habit, an instinct to perpetuate. I should say these people had just the same instinct. Their world was dying; the race was dying. Perhaps they decided to take a chance and try to save some of their race for whatever future there might be."

"But how can they live?" asked someone. "There's hardly any air."

"Remember their enormous lung capacity," suggested Robson.

WITH the suggestion of a rational explanation the fears of the party grew less intense. Some of the more adventurous even volunteered to undertake a further investigation. They would go prepared and well armed. Robson vetoed the idea at once. He pointed out that there were over four hundred of the Lunarians ready to overrun them faster than they could fire.

"But we don't mean them any harm."

"Nor did the others but they got theirs. It doesn't seem to have occurred to you that they must have food. There was nothing to eat in

the vault."

We looked at one another. This implication of the immediate capture of our men had not struck us before.

Robson summoned Captain Toft. This was a danger which concerned the whole ship, not merely our scientific group.

The Captain's incredulity was easily beaten down by our massed conviction. He was all for action and rescue until he realized that the space-suits had been slit and that the men were past all help. Robson pressed for the immediate removal of the *Scintilla* from the Mare Serenitatis to a less dangerous resting place but Toft shook his head.

"The engines are down for repairs. Even by forcing work to the limit it'll take another ten hours." Our faces looked anxious enough to make him add, "I'll do my best, gentlemen, you may depend on that."

Robson thought for a while. At last he spoke. "We must keep them penned up as long as we can. I want two men to go outside and take rifles. Every man or woman who tries to get out of that vault must be shot."

Two volunteers were immediately forthcoming. They hurried into space-suits and were on their way to the lock when a shout from a watcher at the window stopped them.

"Too late," he called. "They're out."

A knot of a dozen or more moonmen had just emerged. They halted a few paces from the cliff and stood on the grey sand, shielding their eyes with their hands from the glare of our searchlight, and looking about them. Now that they were erect, their differences from Earthmen appeared more pronounced.

Their large ears developed for catching sounds in the thin air seemed to dwarf their heads and their huge bulging chests were so disproportionate as to render all the limbs skinny and spindly by contrast. They looked bewildered by

the barrenness of the world they now faced.

One man raised his arm and pointed to a distinctively distorted crag as though it were a recognizable landmark. The rest nodded and let their eyes wander, searching for other familiar sights. More of their kind came out of the vault and joined them. After a short conference the whole group turned towards the *Scintilla*.

The doctor, standing next to me, was watching them with close attention.

"They're not doing too well," he murmured. "The atmosphere must have been a great deal denser when they went in. I wonder just how long ago—"

Robson's voice cut him short. He was addressing the two in space-suits.

"They mean mischief. You two get up into the control dome and take your rifles. We'll evacuate the dome and then you can open the windows and pick them off if necessary."

Robson was right. The moon-men and women did mean mischief. It was in their gleaming eyes and bared teeth as they approached. They had resumed the trappings we had pilfered. Each wore the broad worked belt of Luna and about their necks and ankles glittered metal bangles. Black hair, held back from their faces by ornate circlets, suspended in a lank mane upon their shoulders and down their backs.

One man, slightly taller than the rest, appeared to be the leader. As they drew close he turned to incite the rest. A moment later a volley of rocks and stones clattered futilely against the *Scintilla's* metal sides.

We took heart. The primitive simplicity of such an attack encouraged us. Half a minute later two moon-men dropped inert. Our men in the dome had gone into action. The attackers, by now a hundred strong, were thrown into momentary confusion. But the wavering

was brief and in a few seconds, they were running towards us. They had seen in a flash that once beneath the ship's overhanging sides, they would be safe from the marksmen above.

A wellplaced rock put the searchlight out of action and plunged the cliff face into intense shadow. It became impossible for the riflemen to pick off the reinforcements which would pour from the tomb. They would be all but invisible until the line of sunlight was reached and that line was crawling slowly closer to us with the sinking of the sun.

Another searchlight was switched on but it too was swiftly obscured. The main body of the attackers was now out of view from our windows, though a large number of stragglers continued to dart from the shadow towards the ship. Of these a number fell to the guns—but a larger number won through unharmed.

FROM down the corridor came the sudden clanging of an attack upon our outer door. We looked at one another and smiled. There was precious little to be feared from that direction. Nor were the moon-men long in realizing that the steel would defy their utmost efforts. In a very short time they came clustering around the window, gloating and jostling one another as they peered in.

The leader picked up a prodigious rock which could not have been stirred by one man on Earth. He flung it with a mighty heave against the fused pane. The pane was unharmed but Robson looked serious.

"I don't know how much of that sort of thing it will stand," he said doubtfully. "If they try two or three of those rocks simultaneously—"

The same idea had occurred to the moon-men. We saw them collecting the largest rocks they could handle. There was a leer of triumph on the face of the leader as he regarded us through his slant eyes. Robson rushed back and opened the door.

"Quick, out of this," he shouted.

We left in a headlong rush and as the last of us came through we heard the crash of the shattered window. The door snapped to behind us automatically as the air pressure fell.

Within a couple of minutes a furious battering began towards the stern. Half a dozen of us raced down the ship. As we clattered through the engine room the chief engineer looked up, spanner in hand. The grime on his face was trickled with sweat and his hair lay damp and flat.

"Clamp on the emergency plates," he called as we passed.

There had been no time in the main cabin to fix the heavy steel plates across the windows but now we seized them from their racks and set to with a will. No sooner was a plate fixed over one porthole than the moon-men turned their attack to another and we had to rush to cover that.

In the middle of our activity came word that the men in the control dome were abandoning their position. The place was becoming untenable on account of the bombardment of rocks.

For what seemed hours we lived in a nightmare of rushes from point to point. As fast as we made one spot safe another was attacked. Then, at last, when we were weary to the point of exhaustion, we became aware that the frenzy was lessening. The batterings grew fewer and feebler until at length they stopped altogether.

We waited, puzzled. It was almost an hour before we cautiously removed an emergency plate and peered out. The sun had set and the seabed shimmered coldly in the pale green-blue Earth-light. Of the moon-men, only a few still crumpled forms were to be seen.

"They've gone," I said. "But why?"

Robson pointed towards the cliff and I saw that the stone door was now closed.

"The cold," he explained. "Right now it's colder out there than anything you've ever known. In a little while it will be so cold that what little air is left will freeze solid.

"And the moon-men?"

"It means the end of them. Even in their vaults the air will freeze—though they'll freeze first."

"Poor devils," I said. "To wait all those thousands of years just to freeze to death."

I had an unhappy vision of the last luckless moon-men and women huddled together in their lightless tomb, waiting without hope for the creeping coldness of death. Robson's voice broke my mood.

"All hands on the job," he said briskly.

IT was decided that we would make for Earth. The morale of the *Scintilla's* company was too shaken to undertake the exploration of Luna's hidden side on our present trip. Since little or no calculation was necessary, Toft waited only until the engines were repaired before he headed straight for the great pale disc of Terra.

I slept long. It was all of twelve hours before I reopened my cabin door. My way down the passage led me past the chief engineer's room and I hesitated outside his door, wondering whether to take him along for breakfast or let him have his sleep out. My hand was on the knob when the door opened abruptly and in the doorway stood a woman—a moon-woman!

I stood frozen with the shock, staring at her. She returned the stare, white teeth and dark eyes glinting. She crouched slightly, becoming the more grotesque and horrifying. Her right hand slid forward and I saw that it held a knife which was red with blood. I lunged to grip her wrist, but she was too swift. With a twist and a cry she passed me and was away up the corridor.

I hesitated and then turned into

the engineer's cabin. One look at him was enough—that moon-devil must have slashed and slashed.

For a moment I stood irresolute. The engineer's fate might well have been mine—and I was not safe now. I ran into the corridor. The rest must be warned.

At the threshold of the living cabin I checked in horror. Five still forms lay on the floor, each of them horribly mutilated. I recoiled and fled to the control dome, hoping desperately. My fears were not vain. Just in the entrance, I stumbled over the bodies of two officers. Beside a third figure crouched a moon-woman.

At my entrance, she arose and whirled towards me. I could see that the man at her feet was Toft, alive but bound and helpless. She faced me like some terrifying Medusa, stepping catlike, a knife in either hand. I backed and grasped a chair, intending to use it as a weapon—I had forgotten that all furniture on the ship must be fixed.

She gave a cry, semi-human and chilling. A door on the far side of the dome opened suddenly to reveal a group of the grotesque moon-men and women. It was more than I could stand. I fled, bolting the door behind me.

For the next twelve hours, I remained locked in my cabin. There was plenty of time to review our folly. How could we, even in our excitement, have overlooked the possibility of menace from those twelve coffins that we had taken aboard? Not only had we taken them aboard, but we had even opened them to assure ourselves of their contents. Surely, some of us should have foreseen the danger!

I was unarmed for all the weapons were kept in a cupboard of the main living-cabin. I would have to get there before I could avenge my comrades and wipe out the moon-folk. I crept to the door and listened.

One hasty glance up and down the corridor assured me that it was

empty and I made stealthily in the direction of the bows. I reached the main cabin undetected, and slipped inside. Averting my eyes from the shambles on the floor, I sought the armory cupboard.

Its steel door was locked.

FOOTSTEPS rang on the floor beyond the opposite door. In a flash, I was across the room and back by the way I had entered—weaponless, the only survivor unless they had permitted Toft to live. I could think of nothing but that I must live and carry my warning. And to live, I must have food.

By devious ways I gained the store-room and piled the necessities of life into an empty case. I had lugged it halfway back to my cabin when misfortune overtook me. Rounding a corner, I came face to face with a moon-man.

His surprise was greater than mine—I got in a good drive to the chin while he still stared. He went down with a cry which was half shout and half groan. It was not loud but it served to alarm his fellows. There came a din of feet, pounding down the corridor behind me. Leaving my case of food, I jumped over the prostrate man and fled.

Running and sliding on the metal floors, I made for the only safe place I knew—my cabin. The clatter of pursuing feet grew louder, spurring me on. Turning at last into the final alley, I found my way blocked. But I was desperate and there was only one thing to do. I put my head down and charged like a bull at the four brown figures before me.

There was a brief whirling nightmare of kicking and hammering, and then somehow I broke out of that melee and gained my cabin. With a final effort, I slammed the door in my pursuers' faces. My chest and face were bloody and lacerated. I remember pulling free a moon-man's dagger which lodged in my left shoulder—and after that—nothing.

The jolt of a rough landing finally roused me from my sleep or coma. With an excruciating effort, I raised my stiff body to look through the small porthole. Outside was a stretch of white sand and beyond it a line of frothing breakers glistening in the sunlight. Somehow, the moon-men had brought the *Scintilla* back to Earth.

I was a sick man and it took me a long time to move. When at length I managed to stagger down the passage it was to find the entrance wide open and the ship deserted. Somewhere in the green forest which fringed the beach the moon-folk were prowling and hunting.

I made my difficult way to the fuel store, and close to the tanks I lit a

slow fuse—at least, there would be no *Scintilla* as a safe base for the moon-devils' operations. Then as fast as I could, I made my way along the shore. A few days later I found a long-neglected canoe. I repaired it as best I could and paddled out to sea.

* * * * *

The President of the Lunar Archaeological Society frowned. He pulled his ear reflectively and shook his head slowly. He turned the bunch of papers over and, still frowning, began to read them again.

Preposterous, of course, but—well, there *had* been a Stephen Darcott and he *had* sailed on the *Scintilla*.

The Age of Convenience

By SIMPSON M. RITTER



WHEN some thousand years hence archaeologists dig up traces of our present civilization, so abounding with useful gadgetry, they will probably conclude we were either a very inventive or a very lazy people, and historians will in all likelihood call our time the "Age of Convenience" just as modern historiographers refer to Iron, Copper, and Pewter Ages because of their prominence then.

Some years ago, for example, a New Yorker devised a pencil sharpener that works by itself. One merely inserts the pencil into the machine at a 45 degree angle, pulls it out, and there's the point.

For those odd corners where heat is lacking there is now a portable automatic electric radiator looking like an abbreviated steam heater.

A teaball and teaspoon were recently married in a paper teaspoon with a perforated top. The closed spoon holds just the right amount of tea and the perforations permit the water to seep in. Then there's a mirror which, by means of an ingenious bit of wire, can be secured about one's neck and shoulders and is just the thing for a fellow shaving or a woman putting on a new face.

A new fountain pen has a cleverly concealed blotter underneath the cap. Also, for the girls, a new compact mirror is equipped with an automatic wiper (like that on an automobile window) to clean off the usual cloud of powder whenever the compact is opened and used.

Likewise, for the ladies, is a combination purse and glove. And for the gentlemen, an inventor has come up with a blotter for drying razor blades.

They've even thought up an inkwell that automatically fills your fountain pen. Instead of laboring with the little lever on the pen, you press the instrument into a tiny rubber shell over the ink bottle and four seconds later your pen is loaded. And for the automobile owner, an inventor has devised a sun visor for the car that also acts as a windshield wiper and as a defroster at the touch of a button.



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CHAPTER I

METEORITE

BERT BODELL gazed with undisguised admiration at ringed Saturn through his four-inch refractor on a clear night in the spring of 1952. He was one of that large and ever-growing group of "amateur astronomers" who took delight in observing, when weather permitted, the wonders and glories of the firmament, who occasionally discovered new comets and asteroids before the observatories did. A young lad of twenty, it was one of his greatest delights to peer through the telescope of his own making.

But this night in spring the magnetic glory of beautiful Saturn—white and striped through the 'scope, xanthic-yellow to the naked eye—drew him to aimless staring

worship. He was in the back yard of his home in Oak Park, outside of Chicago. The 'scope had been installed behind the garage so that the lights from the house would not interfere with celestial observations.

Yet, absorbed as he was in the majesty of distant Saturn, when a blinding meteor flare caught the corner of his eye he jerked away from the eyepiece of his 'scope and turned to watch the sight. For a moment he was panic-stricken—the meteor seemed to be coming straight down!

Then the white-hot object streaked down to the horizon and plunged to earth in a southwesterly direction. Being a quick-witted youth, he pulled out his watch and

Mankind Seeks to Destroy the Beings Who

ROBOT ALIENS

a novelet by **EANDO BINDER**

Blind, unreasoning fear took possession of the crowd which radiated from the spot



noted mentally the exact time. As a conscientious star-gazer it was his duty to note the time, approximate length of visibility and apparent source—which latter he judged to be the constellation of Aries.

Bert's mind began to whirl excitedly. The meteorite had landed somewhere nearby. If he could be the first, or one of the first, to locate its position, what a thrill that would be! He might even get official recognition!

Imbued with an inspiration at least as great as the fanatical urge that sent the knights of old after the Holy Grail, the young amateur astronomer precipitately abandoned his 'scope and ran to the house.

"Heavens! What's got into you?" asked Mrs. Bodell as her son tore

like a madman through the kitchen and hall to his bedroom and out again.

"Meteorite landed—direction of Aurora or Yorkville—somewhere around there!" gasped Bert. He jingled his car keys. "Mother, I'm going to chase it in my car!"

"But, Bert dear! It's late. You'll lose sleep—"

"Hang sleep!" cried Bert dashing to the study and jerking an atlas from the shelves. As he turned the pages to a map of northern Illinois, he called to his mother, "Stand out on the back porch, mother, will you—and listen for the noise. If it comes, look at the clock and remember the exact time—the *exact time*—seconds and all!"

Mrs. Bodell complied with a re-

Came Out of Space on a Good-Will Mission!

sighed sigh. If she did not humor him he would nurse a grouch for days.

A MOMENT later, Bert flew to the porch where his mother stood silently. "Hear anything—like a distant cannon or thunder?"

A negative somewhat quenched the boy's eager enthusiasm. It was already four minutes since the time of landing. No noise from the meteorite indicated that it had either landed very far away or had failed to explode on hitting the ground and had bored downward. In the former case it would be so far away that he would not reach it for several hours. In the latter it would take much searching to locate it unless eye-witnesses had been reasonably near its collision with the earth.

"Aw!" muttered Bert, "probably the traffic noise from North Avenue drowned it out." Thereupon, he followed his original intention and dashed to the garage, determined at least to make an attempt to locate the meteorite.

As he drove his new coupé down the alley to reach North Avenue a loud voice hailed him from the back fence of a neighbor's yard.

"Hey, Bert! D'ja see the meteor?"

"I'm going after it," said Bert, stopping the car. "What direction would you judge it—I mean, what town is it lined with?"

"Waal," drawled the neighbor, "I'd say Joliet or maybe north of that, near Yorkville."

From the roar of Bert's accelerating car came a faint, "Thanks!"

Bert swung to the Aurora road, despite his neighbor's mention of Joliet, which was farther south. At Aurora thirty-five minutes later he found a group of excited people in a main street, all waving their hands and talking. His queries got contradictory answers but Yorkville seemed to be the favorite.

Fifteen minutes of hare-brained driving over good concrete highway brought him to Yorkville, a sleepy

little rural town whose inhabitants had mostly been in bed and had therefore missed the meteorite. But one favorite corner was populated by night-lifers, who were discussing the meteor vehemently.

Bert stopped the car at the curb. The Yorkvillers advanced upon him in a body, believing him to want information either on road routes or tourist hotels. Bert surprised them by asking where the meteorite had landed.

One long lean fellow placed his visage at the window of the car.

"The meteorite? Why't fell straight south o' here—"

"Did not!" came a voice from the crowd at his back. "I tell you it was more to the east."

"Straight south," repeated the first man, indicating that the stranger should disregard any opinions but his own. "You a newspaper reporter?"

"No," Bert answered shortly. "By the way, did you hear any noise?"

A roar came from the crowd and after it broken bits of sentences by various seers and savants. "... like ten cannons" ... "like the world split in half" ... "my ears're ringing yet."

The sage individual, who had attached Bert for his own personal dependent, curled a lip at the murmurs behind him and bent a wise eye on Bert. "Bunch of liars—them!" He jerked a thumb backward. "It was a noise, all right, but real sharp and sudden-like—not like a cannon."

"Have you any idea how long after the meteor landed the noise came?" asked Bert hopefully.

The man squinted sagaciously. "No more'n a minute."

Bert thanked him and roared from the spot, turning down the next county highway that went south. A minute—that would make it only about fourteen miles from Yorkville! If it were that near he still had a chance to be among the first there.

In his enthusiasm the boy failed to reckon that he might wander up and down many country roads before actually locating the spot. But luck was with him and he struck the trail just outside of Yorkville. A drawling farmer pointed southeastward and mentioned a road he might follow.

Bert came soon after to a cross-road where two farmers were conversing about the inevitable meteor. They steered him down another road which brought the impatient youngster to a brightly lit country home whose womenfolk and children were running about haphazardly as though they had received news of an invading army.

HYSTERICAL answers finally convinced Bert the meteorite had landed but a mile or so away with "a God-awful noise, sir!" They pointed the direction with trembling fingers and asked if he would see that their menfolk had not been destroyed or hurt, for they had gone there despite their frantic wives' pleas to stay home.

Bert drove down a wagon road which should lead him to his destination. Two miles of the jolting road, then he saw a tiny flicker of light to his right across a wide cornfield.

In a fever of excitement Bert stopped his car, clambered over a barbed wire fence and trampled his way over young and tender corn shoots. As he approached the light he had seen from the road, it resolved itself into a roaring fire, around which several black figures stood conversing.

His first question when he came up to the group was, "Where's the meteorite?"

For a moment, there was no answer. They were all farmer folk—four grown men and three boys. The look on their faces was one of bewilderment.

Finally one of them answered, "Back there behind that knoll. Come along—I'll show you. But it ain't

no meteorite, mister. It's suthin' else!"

Bert was prevented from asking further by seeing the answer for himself as they topped a low hill. There on the other side, a few hundred yards distant, was an object that stopped him in his tracks.

It was a metallic ellipsoid, half buried in the hard untilled ground, glowing bright red and radiating heat, even as far as the hill where he stood! It was, judging from its unburied half, perhaps a hundred feet long and its uniform *surface* was unmarred by anything resembling a door or window. It was not smashed or damaged in any way.

"What—what is it?" Bert found himself asking in a hoarse voice.

The man beside him and two who had followed and now stood with them shook their heads. "It's more'n we know," the gestures plainly said.

Bert made as though to descend the hill but one of the men grasped his arm. "Better not, mister. Gets awful hot when you 'proach any nearer."

Bert nodded and swallowed painfully. As though by a signal the party walked back to the fire, which had been made not for warmth but for light. Men hate to discuss mysteries in darkness.

Introductions went around. When Bert told of his driving all the way from Chicago they looked at him in surprise. At mention of a car one of the men spoke.

"We ought to get the news to some authorities. Maybe you having a car, you'd drive to Joliet and tell the Chief of Police about this thing?"

Bert's answer was involuntary. "I'd rather not—er—I mean I'd like to be here when it's cooled off." He feared the police might detain him with questions. "But if one of you can drive and wants to use my car—"

One of the youngsters eagerly volunteered and Bert handed him the keys.

For the next few hours Bert di-

vided his time between talking to the others and running to the top of the knoll to look at the mysterious ellipsoid. It was not till the third trip that he noticed something no one had previously mentioned.

From a different viewpoint—to one side of the knoll—he could see that the hinder part of the object graduated into a circular flange whose walls were parallel at all points. Although the angle was acute, by standing on tiptoe, he could see over the lower part of the flange and could distinguish, dark though it was, what looked like heavy mesh or honeycomb.

His agile mind told him it was the discharging end of a multitude of rocket tubes. This, combined with several vague hints by the farmers that the *front* of the "meteorite" had seemed to belch smoke, settled something in Bert's mind.

CHAPTER II

THE ALIEN MONSTERS

LIEUTENANT ARPY of the Joliet police, on night duty at headquarters, yawned and looked at the clock, whose steady ticking was the only noise competing with the snores of Policeman Murphy. Lieutenant Arpy, who was pacing up and down like an insomniac, glared at Murphy's peaceful Irish face in exasperation. He didn't mind the man taking a cat-nap at the switchboard, but he could at least not rattle his confounded hard-rubber lips.

At midnight Arpy had kicked him in the shin with a none-too-gentle toe and told him to straighten himself or he'd fall into the near-by spittoon. At one o'clock Arpy had awakened him to tell him of the meteorite—of which he had heard from a returning policeman who had been on beat—to which Murphy had grunted affected interest with-

out fully awakening. At two o'clock Lieutenant Arpy advanced upon Murphy with the full intent of dousing him with a glass of water.

A farm lad rushed in, eyes round with suppressed excitement, followed by a burly policeman who said, "Says he wants to see the Chief about that meteor thing that come down couple hours ago. Thought you'd like to hear what he's got to say, Lieutenant."

The latter nodded. "I'm in charge—tell me about it."

"Well," gasped the boy, nervously fingering his shirt buttons, "that mete'r ain't no mete'r a-tall! It's round and smooth like a egg, sir!"

Lieutenant Arpy looked suspiciously at the other officer. "What's this? Some funny joke—"

"Don't look at me, Lieutenant. I don't—"

"But it's true!" cried the boy almost tearfully. "We all seen it, my dad and two uncles and lots o' others, and we figured it was suthin' for the police. It *ain't* no mete'r."

"How far is it?" interrupted Arpy.

"Ten miles straight west."

Lieutenant Arpy decided to look into it. He ordered his underofficer to get three men into the station's squad car and be ready to leave in a few minutes. He told the farmer lad to get into his car and lead the way.

When everyone had left the room, Lieutenant Arpy allowed a gleam of sardonic glee to come to his eyes. He walked quietly over to the peacefully sleeping Murphy, slumped in the switchboard chair, and viciously threw a full glass of cold water in his chubby face.

"I'm going out, Murphy. If anybody wants to know where, it's to that meteor—ten miles west. You stay awake!"

The police car with its five passengers followed the farmer boy out of Joliet along a decent gravel road that degenerated to a bumpy wagon trail before they reached their destination. Lieutenant Arpy whistled

at the sizable crowd gathered around a fire that was being fed by newly-chopped orchard trees. He whistled louder at the snatches of talk he heard but he found himself unable to whistle when he looked at the "meteor" on the other side of the hill.

It was now a dull red and promised to be quite cool in another two hours. The policemen were able to approach within fifty yards and play their flashlights over its surface, finding it smooth like metal with not a crack or seam anywhere. They silently circumnavigated it to find that the other side was the same.

"Seventy blue devils!" Lieutenant Arpy muttered eloquently.

He thereupon began issuing orders. He sent one man to the nearest telephone to call headquarters and leave a message to the effect that he, Lieutenant Arpy, and his four men would stay with the mysterious object till relieved. He detailed two of the policemen to keep watch, one on either side of it. The farmer folk he disregarded entirely.

HE AND the remaining officer sat down on the knoll. Arpy was speaking.

"I'd be willing to bet, Jones, that this here metal egg is some sort of new ship that some fool inventor took up and didn't know how to handle. Or p'raps it wasn't c'nstructed right in the first place, see?"

"Now what I think," argued the other, called Jones, with the confidence of ignorance, "is that it's a war machine! Yes, sir—a war machine. Take Russia—d'you think fer a minit she's unpr'pared fer war? Not on yer life!"

"Might be," agreed Arpy, willing to concede the point without inwardly crediting it much. "Say!" he exclaimed, looking around, "this crowd is getting bigger right along. I'm betting the papers and radio will have this out by breakfast time."

Lieutenant Arpy then noticed a young man who was dressed too

neatly to be a farmer, standing near them and looking at him in hesitancy. At the officer's glance the boy came closer.

"Pardon me," said Bert, "I heard you talking about what you think that thing is and I—"

"Well, what d'you think it is?" asked Arpy somewhat coldly.

"A transatlantic rocket-ship!" answered Bert with a rush, all eagerness to impress them. "One of those ships that go from Berlin to New York in two hours through the stratosphere. You've seen pictures of them, haven't you?"

"Oh—er—yes," lied Arpy, unwilling that the boy should surprise him. "Sure, sure. So you think—" He bent his eyes on the ellipsoid as though weighing the matter in his mind.

"The pictures look just like that ship," went on Bert importantly. "Rocket tubes in back and they must be in front too—for slowing down, you know."

Lieutenant Arpy was the recipient of an inspiration at that moment. He had a chance to solve the whole mystery before the ship cooled enough to look into it and before the Chief came. He got to his feet.

"How could we get in touch with the rocket-ship people?"

"Call up New York," answered Bert quickly. "They have an office there."

* * * * *

Professor Honstein of the Yerkes Observatory, Williams Bay, Wisconsin, swore bitterly while his assistant helped him unload the photographic plates with which they had meditated catching the image of Saturn.

"Blast!" cried the professor, his voice echoing in the domed telescope pit. "Out with 'em, man! Ruined as they are, we don't have to be careful with them!"

The professor threw a switch with a savage gesture.

"Peabody, I tell you it's—it's provoking! Of all the times for a cursed

meteorite—and of course it had to be a *bright* one—to flare across the ecliptic. *Why* couldn't it have chosen the rest of the sky! There's plenty of it."

Professor Honstein pulled out his watch and conquered his peevishness at the same time. "All right, Peabody. We'll load again. It's only eleven-thirty."

By one o'clock, the professor had got several plates of Saturn and retired. The meteor had quite slipped his mind—he being what they call an "absent-minded professor."

But not so Peabody. He had been partially blinded by the bright meteor as it flashed from almost straight above, grew like a super-fast comet, then swung like a lightning-bolt to the south. It piqued his curiosity and at four o'clock, he tuned in the Early Worm Radio Reporter. What he heard sent him dashing to the professor's room.

"Meteor?" repeated Professor Honstein vaguely, sitting up in bed and listening to Peabody's incoherent words. "Ah—the meteor! What's that nonsense? Not a meteorite but a metallic ellipsoid, half-buried in the ground and slowly cooling?"

Peabody nodded.

"Well, let me tell you," said the professor with a flash of the evening's previous anger, "I'm going to sue whomever that thing belongs to for ruining those plates. Now let me go back to sleep."

CHIEF OF POLICE SAUNDERS
 of Joliet stroked a smooth-shaven chin with portentous gravity as he looked at the mystery ship from the top of the knoll and at the same time listened to the laconic voice of Lieutenant Arpy. A close observer might have seen the vacuity in his eyes that betokened a bewildered mind.

"The rocket people," finished Lieutenant Arpy, "deny having anything to do with it."

"Naturally they'd deny it," said Chief Saunders when Arpy stopped. "Why, if it was their ship they could

be arrested and fined for endangering human life!"

"But, Chief," added Arpy cautiously, "it's quite a jump from New York, where those rocket-ships are supposed to land, to *here*. Kinda unreasonable to suppose they'd *accidentally* go another thousand miles!"

Saunders nodded; within him he wondered where Arpy had ever got the idea of the rocket people and how he knew so much about them. It was not like Lieutenant Arpy to know much about such advanced matters. The chief began wishing to himself that the responsibility of attacking the mystery had fallen to someone else. Somehow, the partially buried ellipsoid struck him as a hard nut to crack.

It was eight A.M. Already a horde of scribbling reporters had arrived and almost besieged Chief Saunders, wanting to know—for their papers—what the thing was all about. Already the news would be headlining around the country, for mysterious ships do not streak from the sky like meteors every day.

The unfortunate Saunders almost hated the policeman who came up after eight to report that the outside of the ship had cooled sufficiently for human hands to touch it. *Now* what to do?

But Saunders, at the crisis of his life, was spared taking the initiative.

A voice, shouting from the foot of the knoll, electrified the crowd on the hilltop. "I heard a noise! *I heard a noise inside this thing!*"

Unbelievable, it proved true. Not a minute later there was a ringing and clanking from the ellipsoid that everybody heard.

There are times when a crowd hovers between suspense and panic. At the clangor from the mysterious ellipsoid, only one thing prevented the latter. A little boy no more than seven pointed at it and asked in a shrill voice of his father. "What makes it jingle, Dad?"

This eased the tension.

Chief Saunders might have made an ass of himself for the world to read about by approaching the now quiet ship and shouting loudly, "Who's in there?" But events moved too swiftly.

Of a sudden a new noise was heard, again freezing the crowd, a noise like the highest pitch of an organ, like the harmonic bellow of a steamship whistle, like a dentist's drill.

A circular section of the ellipsoid's wall, perhaps ten feet in diameter, abruptly parted from the rest of the surface and toppled with ringing tones to the hard ground. Yet it was not a door or hatch because the edges were uneven and ridged unsymmetrically, indicating that the piece had been *cut* or otherwise severed from its surrounding material.

Something was inside and was coming out! The people waited for the dénouement of this mysterious drama that had started with a flaming meteor descending from the heavens. It was the grand moment for which many had gone sleepless and practically unfed.

Then it came—first a series of flickering movements in the shadowed aperture as though mirrors were being uncovered, then a shiny white bulk which emerged slowly and ponderously. It straightened up and stepped from shadow into sunlight so that all could see it clearly. Thus human eyes had the first glimpse of one of the Robot Aliens.

With a low moan, the crowd quivered like jelly, reformed into streams like melting butter on a table and radiated from the spot. Fear—blind unreasoning human fear, the emotion that supersedes all other human emotions—drove them away with but one thought—to escape the utterly monstrous apparition beside the aperture of the metallic ellipsoid.

Only four persons besides the police, who at such times are held

back by a sense of pride, held their ground and dared to look twice. Then they looked at each other, as if questioning individual reasons for staying, and moved together when the people between them melted away.

Bert Bodell, with the individualism his nights of amateur astronomical pursuits had given him, was not swayed by the crowd emotion. Professor Honstein—(his curiosity had got the better of him)—was too pedantic to yield to panic. Peabody had a strong mind—when the professor was around. And the little boy of seven, who had already shamed his elders and been deserted by a weak-minded father in the rush, had the courage of innocence.

With them stood Chief Saunders, his facial expression an idiotic mixture of disdain and terror, and Lieutenant Arpy, who trembled so violently that his puttees came together in regular clicks.

The monster stood motionless and silent, seeming to watch the precipitate departure of frightened humanity. It was a metallic creation, twelve feet tall and faintly suggestive of the human form, but having instead of head and torso two equally large bulks, one of which must have been the head, for it had unmistakable "eyes" and "ears," but no mouth or nose.

From this head protruded four long arms, many-jointed tentacles coiled in repose against the body. From the lower torso came four shorter appendages, jointed twice and reversely. These were folded against the body and terminated in a grotesque parody of the human hand. For support and locomotion, the monstrous creature had two appendages, jointed but once and apparently similar in purpose to human legs, ending in flat plates of metal.

Its composition seemed entirely metallic, silvery in color, with here and there at the joints a blue or blackish metal. From the rounded

top of the upper bulk extended three long thin rods, terminating in balls. It was later observed that whenever the creature walked, sparks of electricity leaped from ball to ball of these rods, accompanied by a loud crackling noise.

This was the nightmarish object that the quartet faced and watched as silently and motionlessly as the metal monster itself observed them.

But when it leaned forward and ponderously moved a leg toward them, the humans paled and gasped and trembled. And when the metal monster proceeded to approach them, an incredible walking machine, they, one and all, without exception, fled.

CHAPTER III

THE ARMY ATTACKS

THIS is something new," said Captain Pompersnap of the Illinois National Guard. "Ten years ago, my men were picketed in southern counties to pacify rioting miners or in northern counties to keep the milk farmers from raising Cain. Now I'm to take my men and surround a rocket-ship which seems to be run by people disguised in armored suits."

While the handsome captain shook a puzzled head, his superior, Major Whinny, explained, "In these times of armed peace, Captain, we must not be lax. If this wingless ship and those metal monsters are a threat to the independence of our great nation, then we must see that they are destroyed."

"Is it as serious as all that?" asked Pompersnap. "I had an idea it might be some publicity stunt."

"Could be," agreed Major Whinny. "For all we know it may be something of that sort. But orders have come from Washington—from the Secretary of War, mind you—for us to picket the thing in case it turns

out more serious. Personally, I think that asinine Chief Saunders of the Joliet Police is a yellow-streaked moron—saying that the first mechanical man which stepped from the ship tried to attack him.

"At least, I'd rather believe the *Evening American* account which stated that the robot or whatever it really is merely took *one step* forward, then turned around and went back into the ship. But Saunders lost his nerve and turned the whole thing over to the Federal authorities and that's why you are going there."

Captain Pompersnap shrugged his shoulders. "Am I supposed to try to talk to the things?"

"No, Captain. You just picket and keep strict guard so the—the *things* don't gallivant around. Washington is sending a specialist to solve the mystery."

A little later, a long line of transport trucks left Fort Sheridan on Lake Michigan and wound its way southwest, loaded with National Guardsmen and their equipment. Captain Pompersnap ruminated during the three-hour trip and felt foolish. Beyond a doubt, he reflected, it would eventually turn out to be some elaborate advertising scheme.

Probably United Alloys had built the ship and armored suits out of a new and amazingly tough metal, had then dashed it groundward to demonstrate its strength, and would soon announce the price per ton and per square yard.

Then the reporters would indulge in a bit of sarcasm and tell the public—"Captain Pompersnap and his men, fully armed and prepared for anything short of war, found the only charge they could make was one for which United Alloys would extend them thirty days credit . . ."

It was the morning of the third day, after the "meteorite" had startled all of northern Illinois and parts of Wisconsin, Iowa and Indiana, that the National Guard arrived and forthwith set up camp to see that a possible menace to the peace of

the nation be effectively ensnared. With military precision the soldiers set up their canvas tents, distributed their trusty weapons and put a ring of guards around the mystery ship.

Lieutenant Arpy of the Joliet Police arrived before noon, emissary of Chief Saunders, who had certain weighty duties that prevented his coming. He sought out Captain Pompersnap immediately, finding him at the top of the knoll overlooking the landing place of the ship.

"What do you think of it?" asked Arpy when introductions and preliminaries were over.

"Pretty clever, I'd say," answered the captain.

"Clever?"

"Of course it's clever," repeated Pompersnap. "Obviously, it's sensational advertising, some big steel company."

Arpy removed his hat and scratched his head slowly. In the twenty-four hours since the first metal creature had stepped from a hole in the ellipsoid's hull several new developments had come about.

The original monster had proved to have two companions exactly like itself, one of which, however, had had its legs so badly smashed that its locomotive powers were destroyed. A timid and distant crowd of humans—using binoculars and tensed to the last man to run at a second's notice—had seen the two undamaged metal monsters lug out the third and set it upright on the ground.

Then they had brought from the interior of the ship various complicated and small devices with innumerable markings and controls. These they all three had worked, using their multi-jointed tentacular arms and the human-like hands with amazing dexterity.

At night the metal monsters had again entered the ship and brought forth a tripod affair whose spherical summit cast a brilliant white light all around them, so that their queer manipulations could go on uninter-

rupted. By morning the ground just outside the ship was littered with a motley array of unnamable instruments, most of them metallic and mirrored, some containing jars of colored solutions.

Arpy thought over Pompersnap's odd idea in his slow incoherent way and finally ventured to remonstrate. "But, Captain, what would a steel company be having them machines playing with a lot of crazy toys for?"

Pompersnap shot him a scornful glance. "For the effect, man—and to drag out the mystery so that it'll be headlined longer."

"Is that why the gov'ment sent you here?" asked Arpy.

"No," snapped the Army man, flushing. "We are here because your Chief of Police thought this was war-stuff and was afraid he was risking his precious life. Take a look! There ain't a weapon around that ship."

Arpy muttered agreement but thought it proper to add, "I'll tell you, though, Captain, them things is ornery-looking from closer up. If you'd ha' seen that first one stepping toward you like a skyscraper on legs you might kinda—sorta shiver!"

Captain Pompersnap expanded his manly chest at these words and allowed a look of noble bravery to cross his handsome features. "Lieutenant Arpy, I see you don't know us men of the Army. Don't you ever get the idea that those things, just because they're big and strong looking, would scare us. Nothing scares us."

"Well, when you get down to it, fellows like us," said Arpy, "soldiers and police, are above the average that way. Take us and our criminals now—"

From this congenial start, the two brave minions of law and order began a delightful conversation in which each matched stories of bravery and prowess.

IN THE afternoon the specialist arrived from Washington—Colonel Snoosharp by name. He had a

secretive air about him and his pursed lips seemed to betoken that he had much to say, but that duty prevented him from revealing important secrets. He drew Captain Pompersnap away from the camp to have a heart-to-heart talk with him.

"Now, Captain," he began, "this whole affair may prove more serious than anyone thinks. You are under my orders—I have the proper authority from the Secretary of War—and first of all increase your sentry line. Furthermore, set up your machine-guns and—let's see, have you any larger pieces?"

"Why, no—except grenades and tear bombs. But what—"

"Now listen to me," went on Snoosharp in a low voice as though spies might be eavesdropping. "Give your sentries grenades and impress upon them they must be alert at all times. In fact, all your men must be on their toes. You really should have some heavier pieces—well, later for that.

"Captain, detail me a party of ten armed men who will accompany me. I was told to clear up the mystery and I'm going to approach those metal monsters or robots and attempt to communicate with them. And for heaven's sake keep the people back. There's at least ten thousand of them around here."

Captain Pompersnap picked nine men and himself joined the colonel. The crowd immediately sensed that something important was occurring and only the stern line of bayonet-armed Guardsmen kept them from pouring closer.

At the top of the knoll the party formed in military step, two rows of five each, with Colonel Snoosharp in front. Halfway down the slope the captain's voice barked out, "Present arms!"

The party reached the foot of the knoll and halted. Not twenty yards away was the nearest of the three metal monsters. The Robot Aliens had ceased their mysterious work with the queer instruments and two

of them had faced directly about.

The humans, seeing the creatures close up for the first time, felt a vague dismay—even a little fear. Ominously quiet and inhumanly proportioned, the Aliens struck a note of unreasoning terror in the human heart of flesh and blood. The ground beside the ship had been trampled hard as though steam-rollers had gone over it, attesting to the creatures' terrific weight. Mechanical eyes, with lurking unfathomable depths, peered unblinkingly at them.

Colonel Snoosharp could only bolster up confidence by periodically shifting his eyes to the shiny bayonets back of him. Captain Pompersnap remembered suddenly Arpy's words, "... you might kinda—sorta shiver!" Several of the bayonets danced in the sun from hands that trembled.

Pompersnap nudged the specialist who had fallen into a trance. Snoosharp started and licked dry lips. Then he shouted out at the motionless Robot Aliens, "Who are you?"

Beyond a click from mechanical ears that turned funnel-shaped objects toward them, there was no sound from the metal monsters.

Snoosharp tried several different languages without success.

Suddenly the Robot Aliens retaliated. The foremost raised one of his tentacular arms and stretched it out till it pointed skyward. Holding it there, he swung a second tentacular arm in circles, paused, swung again, twice again swung and paused. Then the tentacular arms fell limply into the coils with a faint sound of whirring machinery and rubbing metals.

The captain and colonel, equally pale and disconcerted, looked at each other helplessly. The creatures could not speak or understand and gesticulated in a quite incomprehensible way.

"I think," whispered Snoosharp hoarsely, "we'll just have to give it up."

Captain Pompersnap responded with alacrity. "Right about face! *March!*"

Then a surprising thing happened. The foremost metal monster, the one which had gesticulated, moved toward the retreating men, waving all its appendages violently. As it moved the three prongs on its "head" sparkled with electricity—a sound which associated itself in the soldiers' collective mind with machine-gun fire.

In blind panic at hearing this dreadful crackling the Guardsmen, without an order from the captain, who was incapable of giving orders at the time anyway, fired at the Robot Alien and then ran precipitately. But neither the captain nor the colonel was last to reach the hilltop.

The former, completely unrattled, shouted for his men to, "Repel the attack," at which several soldiers flung their grenades. None reached the Robot Alien, which now strode quite rapidly up the slope like a nightmare horror, throwing all the human watchers into a frenzy of blind fear.

Scattered bullets flew through the air and a few rang upon collision with hard metal. In a moment of sanity Captain Pompersnap tried to rally his men but they were absolutely deaf to his commands. They ran, pausing to shoot at times at the twelve-foot tower of metal that lumbered along behind.

The crowd on the other side of the knoll, hearing the shots and explosions and hoarse cries, screamed in mortal fear, trampled over itself without thought and poured across the fields away from the scene of action.

The Robot Alien gained the top of the knoll and then stopped. Clicking eyes swept the scene—the black scurrying humanity, the brown moving soldiers, some of whom stood their ground, the still bodies lying on the ground, unfortunates who had been swept off their feet and

crushed. A hand grenade arched from a resolute-faced man in khaki and exploded not a foot from the machine-man's feet. Beyond a slight swaying and short backward step the metal monster took no notice. It stood there for a long minute and then slowly turned and descended the knoll back to its fellows.

The reports that reached the public ears and eyes were vastly distorted. In the main, the individual reporters had used their imaginations and painted the Robot Aliens as malign enemies of mankind, armed with terrible weapons. One reporter said it had long metal whips with which it had scourged and beat people during that hectic affair.

Captain Pompersnap and Colonel Snoosharp had to fabricate a story of attack by the vicious Aliens to cover their own cowardly panic and shameful lack of competence in such a crisis.

Not only was Captain Pompersnap an arrant weakling but he was also an accomplished liar. Worst of all Major Whinny, a political officer and therefore incompetent, believed him, sympathized with him and promised retribution.

Colonel Snoosharp's report to Washington by telephone aroused the whole War Department. Due to the conflicting newspaper accounts and the still more garbled radio effusions there was none to gainsay that, "The Metal Monsters are inimical to human life, dangerous to the continued peace of our glorious nation and absolutely void of human feelings or sympathies."

The government, with characteristic sagacity and wisdom, promptly ordered the territory under martial law and transmitted secret orders to Major Whinny to destroy the enemy.

There had been thirty people killed, most of them by the panic of a fleeing mob, the rest by stray bullets, some thrice that number injured in various ways. Yet all the Robot Alien had done was walk up the slope and stand at its summit

for one minute! Truly it was a formidable destroyer of human life!

CHAPTER IV

PANIC IN CHICAGO

MAJOR Whinny, small, wizened, thin-voiced and arrogant—and incidentally allied with powerful political interests—sent the entire Fort Sheridan soldiery to the spot, along with anti-tank guns and several larger pieces of ordnance. In wartime he would have made one of those commanders who run hastily over important data, disregard perfectly obvious precautions, and pour a flood of cannon-fodder at the laughing enemy.

There were sane and intelligent people who saw from the conflicting reports that it was quite possible that imagination had made Robot Aliens so destructive. One of Captain Pompersnap's own men, a quiet-mannered private who had calmly climbed a tree of the orchard during the excitement and watched the whole thing with unprejudiced eyes, came to him at the news of armed attack and declaimed the action as unwarranted. Major Whinny listened to only half his speech and then had him arrested for dishonorable action—he had climbed a tree after all.

By the afternoon of the fourth day elaborate preparations for attack were made. Troops were stationed at all points of the compass in a huge circle of three miles, armed with anti-tank guns. Artillery crews were stationed farther back with heavier weapons and enough ammunition to bomb all Chicago. The Air Force was also scheduled to drop bombs. It was to be quick and decisive.

"What I'm worried about," admitted Major Whinny as he looked out the window of a farmhouse

which he had commandeered as his temporary headquarters, "is whether they have any weapons more dangerous than that one you mentioned. I mean any guns or bombs."

"I suspect they might have, sir," commented Captain Pompersnap. "But I only know definitely of the one that sparkles like rifle fire and makes guns go off accidentally—which, as I've said before, accounts for so many wounded by stray bullets. It's obvious that my men could not have shot those bullets voluntarily."

Major Whinny nodded. "I am prepared to say though," he said reflectively, "that those numerous instruments they had strewn about and were assembling are sure to be some form of lethal weapon."

"In that case our attack will catch them unprepared," cried the captain eagerly.

A helicopter landed in a plowed field and its pilot came in with a salute.

"I beg to report, sir, that there is no particular sign of activity from the enemy. They are outside the ship, engaged in fingering certain instruments I can't define, sir, and seem oblivious to anything else."

Major Whinny waved a finger for him to go.

"They are together and unsuspecting, Captain. Let's give it to 'em!"

The anti-tank guns burst into rapid fire, which at first missed its mark but gradually crept closer as observation planes above radioed range figures. At the bursting of shells and the flying of clods and shattered rocks the Robot Aliens jerked to their feet—except, of course, the one whose pedal extremities had been previously mangled—and gazed about.

When the explosions of larger shells joined those of the .57's the two standing creatures hastily tugged at their helpless companion and started to carry him into the ship. Then the first direct hit came.

A shell tore a hole at their very feet. Another struck the ship and ripped a small fragment of the hull away.

At this the two whole-bodied Aliens abruptly left their companion and raced away from the ship. For the first time human eyes saw with what amazing speed they could move. At the rate of a slow automobile, legs flying like pistons, the two metal monsters quickly traversed several fields, plowed through barbed-wire fences without a pause and neared a troop of soldiery who fired several sporadic rifle volleys and then scuttled away like frightened rabbits. Bullets had no apparent effect on the monsters and they disappeared in the distance.

Major Whinny got two pieces of news at once. One, the ships and surroundings had been bombarded to dust. The other, two of the Robot Aliens had escaped and flown the cage.

* * * * *

"Just *what* are we faced with?" gasped the President of the United States, his tone betraying inward agitation.

Secretary of Defense Rukke ran a finger around his tight collar. "That is not easy to answer, Mr. President. Suggestions have been pouring in upon me but they are all guesses. Some say they are a foreign threat, first members of an invading army of metal monsters. Again they are creatures from the ocean depths, encased in pressure suits. But the suggestion that most appalled me was that they are creatures from another planet!"

THE President smiled even in his predicament and bent a pair of amused eyes on the Secretary of War.

"Strange, isn't it, how people's imaginations will run away with them?" he said half-scornfully. "Beings of another planet—*bah!* The public has been absorbing too much of these—what are they called?—science-fiction stories that have been

circulating the last thirty years. I read some of them once out of curiosity. They are so preposterous and hare-brained that it is no wonder all those queer ideas about the metal monsters sprang up. All crazy, aren't they, Rukke?"

"Well, yes," answered the Secretary defensively. "But still, Mr. President, they are *something* out of the ordinary. We've all heard of robots and mechanical men a lot, but dam-me if I've ever heard of things as independent and—and human-like as these. The important thing is—what to do about them?"

"Yes," mused the President, stroking a dictatorial chin. "We must do something about it, that's sure. You say there are only two of them now?"

"Just two," assented Rukke. "Major Whinny and his Fort Sheridan militia bombed and destroyed the third and their ship. He went over the ground after the bombing and found it strewn with pieces of machinery, wheels, cogs, gears, axles, wire, plates.

"Yet the ship's hull had withstood the bombing to a surprising degree, being shattered only into large sections, not into small pieces. The inner contents of the ship, which was quite a large one, were completely demolished."

"And Major Whinny tried unsuccessfully to communicate with them before the bombing?"

"Yes, Mr. President. Whatever or whoever they are they understood no common earth language—or did not care to."

"And they have destroyed property and caused death and injury to several dozen United States citizens?" continued the President.

"Exactly, Mr. President. And they have made no attempt to explain their presence or get in touch with authority."

The President pointed a finger. "Then, Rukke, we must hound the two remaining metal monsters down and destroy them as being unwanted,

unauthorized and dangerous aliens. Whatever their purpose it cannot be benevolent, for it has already proved the opposite. Therefore will I issue a formal denouncement of the two metal monsters which will empower you to war upon them with any and all means at our command. Our glorious democracy *must* be saved!"

* * * * *

The Mayor of Chicago darted his eyes all about the room before he bent close to Alderman Gorsky, speaking in hushed tones.

"So, Gorsky, you see him about that. Tell him it's okay with me. Get a regular contract and purchase papers. Have X—you know who I mean—make out the fake contract and bring it to me secretly and I'll look it over. Then have G.S. come here next week Monday at noon and we'll figure out *his* cut. And then, Gorsky—" The Mayor smiled unctuously.

Gorsky licked his fat lips as though thinking of fried chicken, which he loved with an unholy love—the same love he bore toward filthy lucre.

"And then," finished Gorsky, "we'll find fifty thousand laying in front of us like a present. A park will go up on the South Side, the contractor will be paid, the people will be pleased in my ward and no one will miss a bit of money that slips *our* way!"

"Yes, yes," said the Mayor, rubbing his hands gleefully. "Oh, yes, yes. But for heaven's sake, watch your step."

He broke off, listening. "Say, Gorsky, what's that noise? Hear it? like a steady roar somewhere south."

Together "Honest Pete," the Mayor, and his pet alderman cocked their ears and sought to define the rumbling and rushing sound that came to them above the Loop traffic roars. Gorsky ran to an open window and looked out upon State Street. Beyond the fact that hundreds of people had stopped and looked around puzzled there was

nothing to see.

The Mayor grabbed the telephone and called below. "What's up?" he barked.

Gorsky saw him grow pale, saw a trembling hand hang up the receiver.

"Good Lord, Pete! What's the matter?"

The Mayor, all his poise and smugness gone, answered in tones that had lost their oiliness and grated harsh instead, "Those metal monsters! They're coming down Michigan Avenue."

The faint and distant sounds grew to a roar as the metal monsters came north on Michigan Avenue and neared the congested Loop with its thousands of shoppers and innumerable cars. The Mayor wanted a close look at the creatures that had been headlined for five days, yet dared not leave his office. But the Mayor had his wish. For some inexplicable reason the two tall metal beings turned off Michigan Avenue and finally came down State Street, passing just under his window.

IN A street suddenly deserted, except for numerous stalled autos and one lady who had fainted and lay flat on the sidewalk, the two Robot Aliens made their way. As in a hideous dream the Mayor and alderman watched from their window. A moment of panic came to them when a lackluster depthless mechanical eye bored straight in their direction for a split second.

Yet for all of the reputation the creatures had as ravening ruthless destructive monsters, the Mayor saw that they moved along quite carefully, walked around autos, stepped over the reclining lady, and made no move voluntarily to destroy property.

But accidents will happen. One of the Robot Aliens, in passing the Mayor's parked car—a new custom job with shining body—got his left "foot" caught in the back bumper on the up-step. There was a rending of groaning metal, a sudden flurry of tentacles and arms, and then the

metal monster toppled off-balance directly onto the Mayor's car.

From an almost complete ruin, the seats and top ripped to shreds and the body scratched by waving tentacles, the fallen Robot Alien arose. After a hasty glance at the sorry mess it imperturbably joined its companion and went on, its own body not so much as scratched!

The Mayor looked at the wrecked car, which had been his joy and pride for but a week and mentally made a reservation to increase his graft to twice what it had been agreed upon for the park project in Gorsky's ward.

* * * * *

Commander Jill of the Air Force looked around at several subordinates with whom he was in conference, a peculiar smirk on his lean face. "So with seven bombers and a squadron of scouts we're to hunt down and blow up the metal monsters—two harmless and innocent somethings that have done nothing but walk around and scare people. But orders are orders and these came from Washington."

"Why call them harmless and innocent, Commander?" asked one officer. "They've already caused dozens of deaths and lots of damage."

"Sure, sure," agreed Commander Jill. "But only because people lose their heads and kill each other in the rush to get away. Now I've been following this up pretty close, and do you know there's not a stitch of evidence that the metal monsters have any weapons? They have caused only indirect deaths without premeditation."

"But what is the world *are* they?" asked a young captain. "Everybody talks about what they do and how they look but nobody says *who* or *what* they are!"

Commander Jill shrugged his shoulders. "Nobody knows. What I'm driving at is that the authorities should be reasonable and try to capture the blasted things and find out what they are. They may have a

human brain running them.

"Well, our orders are to bomb 'em and bomb 'em we will. Yesterday they crossed Chicago going north along Michigan Avenue out through the Loop, went west on Lake Street and circled south again. Then they picked up speed as if they'd seen all they wanted to see of Chicago and scooted out toward Harvey. No reports on them last night, so I figure they must have lain low some place in the dark. Now it's daylight again and I figure they'll be moving soon, wherever they want to go next. So we'll head for Harvey and Homewood and scout around till we locate 'em. Then we send our bombers."

"It's going to be some job bombing things that small," said one officer, "unless we swing low. But it'll tear up the country something fierce."

"Orders are orders," returned Jill.

A squadron of small ships arose from the army airport of West Chicago and flew southeast. At Harvey they dispersed and scoured the countryside. A plane that had penetrated far to the east finally discovered two shining figures moving along a concrete highway in the direction of Gary, Indiana. A radio message brought the other scouts around and a half-hour later seven roaring bombers came to the scene.

Commander Jill in his flagship told the pilot to dive ahead of them so that he could see them closely. Unblinking expressionless eyes followed the course of his ship as it zoomed not a hundred yards ahead of them. The two Robot Aliens were jogging along at some twenty miles an hour, apparently as light-footed as athletes. A continuous play of electricity sparkled at the tops of their heads.

Commander Jill ordered a bomber to swoop overhead and make a pass. The bomber descended in a power dive, flattened at half a thousand feet and dropped an egg. It was a small bomb as bombs go but up-

rooted a dozen trees at the side of the highway—it had missed the mark by a hundred feet.

The effect on the metal monsters was to cause them to stop and stare upward, much as a human might if a house had dropped from the sky. While they were standing still Commander Jill sent another bomber at them. It seemed like a sure thing—the egg arrowed straight at the metal beings.

But at the last second they leaped away with amazing dexterity. The egg tore a jagged gash in the highway and flung fragments in a geyser, some of which struck the metal monsters with what would have been a death-blow to a human. It had no more effect on the Robot Aliens than a feather might.

Commander Jill had watched with fascination and noticed that the metal monsters displayed so sign of fear. They had become wary, watchful of the menace from the air, yet their every action showed nothing of that emotion known as *fear*. They seemed to be calmly appraising the threat of air attack and making a careful unhurried plan of escape.

As a third bomber dove at them they separated and ran in opposite directions, at right angles to the highway, out into the open prairies. One would eventually reach a state forest preserve not three miles away to the north. The other would find only open fields and towns for a long way.

Commander Jill sent three of the bombers after the one going north and four after the one going south. He himself went with the ships going north. Again and again his bombers swooped and dropped their eggs, plowing up soil that had never felt the concussion of bombs since the birth of time. Each time they missed, for the fleeing metal monster seemed to have supernatural eyes and without slackening pace it nimbly sidestepped the explosions. Commander Jill knew before an hour was up that it was a waste of bombs.

CHAPTER V

THE MAN WITH LOGIC

FRANK MILLER, wealthy owner of a tobacco plantation and a graduate of Yale, where he had majored in botany, listened to the radio News Service just after lunch. The announcer's voice was excited

"*Flash*—second of Metal Monsters destroyed at nine-o-four a.m. today! The strategy of General Pille of West Point succeeded. His masked battery of ten cannon took the unsuspecting metal monster unawares and blew it to bits. General Pille, who will get a Congressional Medal for great service to the country, had kept the Metal Monster's movements under observation during the last three days since it left Chicago, after paralyzing that city's traffic and business, with its companion.

"General Pille knew that aerial bombing was out of the question, for the monsters have already demonstrated a peculiar quickness and cleverness in jumping and running. So to him came the brilliant idea of waylaying the creature along its known course and allowing it to walk into a few high-powered shells. One shell struck the creature squarely and scattered it to the four winds in tiny pieces. Thus that menace is gone.

"As to the one which headed south, it has been reported at numerous spots and its course has been plotted to take it into Kentucky, somewhere near Henderson. At present General Pille is planning to waylay this one in the same manner."

Frank Miller pulled the bell-rope. To the butler who answered his signal he asked, "How far is Henderson from here, Jussy?"

"About thutty mile by road, suh," answered Jussy. "De way de crow fly is on'y 'bout twenty mile."

"I see. Thank you, Jussy. By the way, Jussy, can you round up for me the news about these Metal Monsters? I haven't bothered myself much with neadlines for the past month."

"Oh, yas, suh," eagerly supplied Jussy. "Ah been saving de newspaper accounts eber since dat fust day w'en dey come down. Just a minit, suh; ah'll bring de whole bunch to ya, suh."

Jussy left the room and returned in five minutes with a sizable armful of newspaper clippings, all with enormous eye-searing headlines. They told much and yet little.

Frank Miller had something of an analytical mind. He went through all the printed material. When he was done three things he had read stuck in his mind. The first was a sentence from an interview with Professor Honstein of Yerkes, who had been one of the first to see the ship and metal beings. "... and I verily believe they are from another planet, perhaps another solar system, creatures of a metallic evolution as opposed to us of an organic evolution ..."

The second was from an interview of Commander Jill of the Chicago Air Corps. "... my impression was that the creatures knew no such emotion as fear, which is strange, for even an iron man, threatened by destruction, should show fear of that doom ..."

The third was from the biting pen of a well-known satirist and cynic, who had written an essay on human nature after observing the chaos in Chicago. "... isn't it strange that as yet the so-called 'Metal Monsters' have displayed not one weapon or have ever actually killed? What then accounts for over a hundred deaths in Chicago on that great and exciting day ..."

Miller mused awhile, then threw the clippings down on the desk and rang for the butler.

"Jussy, have Jamie saddle up Old Baldy. I'm going for a jaunt till

dinner time. When I'm gone you can take away your clippings."

IT WAS Miller's habit to put from his mind all mundane thoughts while out riding, to enjoy the quiet woodland scenes. He put Old Baldy to a trot at first till they were well away from Owensboro, then let him walk along at his ease. Tall oaks and majestic maples cast a soft shade over him. Song birds twittered and occasionally sang sweetly. The peace and joy of a quiet June day hung all about him like a subtle perfume.

Frank Miller, of a long line of tobacco kings, was unmarried at the age of thirty. His wealth could have bought him social prestige in any large city, but like his ancestors before him, he preferred an unostentatious life in practical obscurity. Intelligent and well educated, the last of the Millers found his greatest enjoyment in reading, with hunting and fishing for diversions.

He decided to visit his private hunting cabin, secreted in a large hardwood forest to the west. The footpath in one place bisected the road between Henderson and Owensboro. He had to bend low at places where low-hung branches waved at face level. At the road crossing he straightened up, then reined in his horse sharply. A block down the road was a tall metal creation rapidly approaching him.

"Lord!" breathed Miller at his first sight of a Robot Alien in life.

His first reaction was panic. Then he remembered the cynic's words, that the metal monsters had never displayed a weapon or an inclination to wreak harm. In other words, it was only blind human fear that had made the metal beings so formidable. Miller squared his shoulders and waited for the queer thing to come up.

The Metal Monster was moving at an easy jog and the watcher marveled that it moved so quietly, without the clanking noise of worldly

machinery. Its eight arm-appendages were folded against its body but Miller could see its several eyes clicking and shuttering as it turned its "head" slightly from side to side, showing that it was not oblivious to its surroundings.

The human watcher found himself wondering what marvelous machinery ran that giant metal frame, what powerful and efficient engines gave it motive power. He wondered too how much intelligence reposed behind that immobile metallic shell, whether it was organic intelligence or mineral, as Professor Honstein maintained.

As the mechanical being lumbered up, grotesque and awesomely large, an eye fastened on the lone human. It seemed to drink in the picture of Miller sitting erect and undisturbed on his horse, returning stare for stare. *Then it stopped!*

Miller paled a bit at the sight of the inhuman thing standing still and facing him, not twenty feet away. Then he saw a jointed arm stretch jerkily toward him. Long metal fingers clenched and unclenched. But Miller was more puzzled than alarmed, for the creature had not stepped closer.

His horse, well used to seeing all sorts of vehicles, stood motionless and Miller himself sat like a statue.

The creature next uncurled a tentacular arm and made four imaginary circles with it, pausing after each one. Then it tapped its breast.

Miller was a man of quick decisions. "It" wanted to talk to him. "It" was seemingly friendly. And Miller found himself wanting to talk to "it"!

It occurred to him at the same moment that if they stayed in the open long, someone else would spy the monster and would spread an alarm. Miller didn't want that. He wanted to have the creature to himself for at least a few hours, to find out whether communication between them were possible. His hunting cabin sprang immediately into his

mind as the ideal spot for secrecy.

Miller made a simple pantomime. He pointed to himself, then to the creature, then down the path. The metal being repeated the gesture with an arm as if in agreement.

Thereupon the man spurred his horse forward, crossed the road and looked back. *With ponderous steps the metal monster was following!*

The hunting cabin was five miles away. Miller rode his horse at a trot, looked back frequently to see the incredible miracle following him like a dog. He began to wonder what he would do next. The creature had no mouth and therefore no voice. It had ears to hear but no tongue to speak.

Then another thought struck him—it had eyes to see and fingers to write! If it had a reasonable intelligence he ought to be able to show it the connection between written words and their meanings. But that would take days—

Miller jumped from his horse when they came to his cabin, took a swift glance inside, then returned to the metal monster which stood motionless near the door. Miller pulled a card from his pocket and wrote with his fountain pen a short message to Jussy.

"I am staying at the cabin overnight. Come this evening with some plain food. Whatever you hear or see, Jussy, come up to the cabin."

He pinned the card to the saddle horn, headed Old Baldy down the trail a ways and gave him a slap on his haunches. With a whinny the horse galloped out of sight.

Emotionless lackluster mechanical eyes followed the man as he stepped again into the cabin, to come out this time with several sheets of yellowed wrapping paper and a flat board. Miller printed the word *man* in large capitals with his fountain pen and showed it to the creature, pointing to himself. Then he wrote the word *tree* and pointed to a near-by oak. Then he wrote *eye* and pointed both to his own and

the creature's eyes.

This done he drew a long breath and held the paper toward the metal being, wondering if it would understand. He watched in fascination as a double-elbowed arm unbent, raising a hand with one outstretched finger. Unerringly the finger pointed to man, tree and eye and their corresponding words.

"Lord!" muttered the human. "It understands!"

HE THEN made a list of ten more simple nouns—grass, leaf, bark, house, men, cap, leg, arm, dirt and car. He went through the list once and to his astonishment the creature duplicated his designations without the least hesitation. It not only had human-like intelligence but it seemed to have a phenomenal memory to remember words it had never seen before in relation to their counterparts.

Miller next tried less concrete ideas—jumping, running, waving, air, sky, light and shade etc. Sometimes he had to repeat his pantomimes once or twice but invariably the metal being caught on and repeated them and pointed to the correct word.

This miraculous display of keen intellect convinced Miller that he was dealing with a mind at least equal to his own. After trying many dozen more words Miller heard the sound of hoof-beats. Jussy came up on Old Baldy.

"I brought ya sump'n to eat like ya said, suh," began Jussy, holding out a paper package. "But w'at does y'all mean by—"

His eyes at that moment encountered the Robot Alien, which had been partly in shadow and practically invisible from the trail. Jussy's black skin grew three shades lighter and his eyes popped in terror.

With a shriek he reined Old Baldy about and attempted to leave but his master had a firm grip on the bridle.

"Lemme go!" wailed Jussy. "Ah jus' seen de Debbil—jump on, suh,

an' le's go w'ile de goin' is good!"

"Listen to me!" said Miller, hardly knowing whether to laugh or be angry. "Jussy, look up!"

"Yassuh!" said the darky, uncovering his face and looking at his master.

Be it said here and now that Abriel Jussy, though little known to the world and far less honored than such men as Chief of Police Saunders of Joliet, Captain Pompersnap and Major Whinny of Fort Sheridan and Colonel Snoosharp of the Secret Service, had more courage in his simple heart than any of them. Once his master had vouched for his safety and once he had seen that the fearsome metal creation was as gentle as a kitten, he dropped his instinctive fears and looked at it in curiosity.

"Come along," said Miller, who knew human nature. "Let me show you my pet and what I have taught him already."

In Miller's mind the metal being had changed from an "it" to a "him" on partaking of semi-human attributes. He held up the paper so that the mechanical eyes could see and pointed to *man*, whereupon a tentacular arm swung first to the master, then to the servant.

"See?" said Miller with pride in his voice. "He understands."

"Lawd help me," commented Jussy. "Der mus' be a man inside o' it."

"I don't think so, Jussy, not a *man*! But I do think there's a brain or a creature with a brain in it. And believe me, Jussy, that brain is a mighty intelligent one."

"Yassah. But what y'all plans to do, suh, wit' dat t'ing, now ya got it heah?"

"Jussy," began Miller, "I'm going to *teach* that creature the English language by means of words in print. I don't care if it takes a month or a year. I'm going to live right here at the cabin and you and Jamie will bring me food.

"You circulate the news at home that I've gone to Europe or China

or somewhere and won't be back for an indefinite period. You and Jamie are going to bring me books, too, lots of them with *pictures*—and paper—and pencils—and a special oversized metal pencil for that metal man so that he can write and tell me what he knows, after he learns enough to write.

"Jussy, old boy, we're going to surprise the whole world!"

CHAPTER VI

PROXIES FROM MARS

AN abridged version of Frank Miller's famous work "The Robot Aliens" follows:

It is sad indeed that the authorities misconstrued the events immediately following the landing of the mystery ship in northern Illinois and saw fit to declare a state of war on what were known as the Metal Monsters. For the following paragraphs will demonstrate that the 'Metal Monsters' were not ferocious enemies of mankind but simply *proxy ambassadors from the civilization of the planet Mars*, ingenious robots that took the place of flesh-and-blood Martians in the long and trying trip through space.

On June 15th of this year of grace, 1952, I met the sole surviving Robot Alien on a desert road between Henderson and Owensboro, Kentucky. Whatever upheld my courage I do not know, except that it was perhaps an intuition or hunch that the fearsome creature I saw approaching was fearsome in appearance *only*. Nevertheless, I held my ground and watched it.

That started our contact, for I thereupon led it to my private cabin in the woods and started the task of communicating with it.

The Robot Alien confided in me recently that it had more than once tried to get into close contact with earthly beings but none had had the courage to stop and face him! Incredible fact!

In two months I taught the Robot Alien enough so that we could exchange information of a simple sort. It seems strange that I should speak of the Robot Alien as a living being when actually it is a machine, but since I do not know the name of the Martian he represents—we used the symbol X between us—and since the Robot Alien itself is more real to me than its controlling power millions of miles across space, it is easier to speak of the robot as the actual being.

Briefly, X on Mars and his two companions, Y and Z, constructed, after a lifetime of work, the three robots which we saw here on earth. These three ingenious mechanisms were encased in a welded ellipsoid, along with numerous instruments, and shot to earth under rocket power.

The ship took four months to cross the void. Every last bit of rocket fuel was used up in the landing but it was not enough to prevent a terrific crash. Only the incredibly tough hull saved the contents from being ground into metal hash. As it was, one of the robots and several of the instruments were damaged.

Now a word is necessary on the robots themselves. What they are run by or what ingenious mechanical principle operates them I do not know—our present interchange of words includes nothing of such involved things. But I am confident that years of effort on the part of scientists and engineers will finally bring all that out.

For my part of the affair I know only that the contact between X, Y and Z and their respective robots was unbelievably intimate.

The Robot Alien—(or rather X, *by means* of the Robot Alien existing on earth today)—assures me that he hears and sees and moves as surely and accurately as though he were a human being walking around on earth! To X, the Martian, he is almost as fully living on earth as though he were here instead of encased in some sort of complicated control chamber on Mars!

Thus it will be understood that when the Robot Aliens stepped from their ship and first cast eyes on Earth it was with the same thrill that an Earthman would get stepping from a ship and gazing at Martian topography!

It was Z's robot that was injured in the crash, its legs mangled beyond use. Accordingly, the other two carried Z's robot out of the ship so that it could help with the instruments. These instruments are, for the most part, incomprehensible to me and X did not try to explain them. However, I know that they tested such things as gravity-pull, air-density, air-composition and sunlight intensity, all for their Martian scientific records.

The Robot Alien managed to convey to me that they were astonished beyond all measure at the fear the earth-people showed from the first. It may interest humanity that X considers that human reaction a trait of low intelligence and poor reasoning powers that are completely dominated by an instinctive emotion that surprised them. My own inference from this is that Martian civilization, vastly older and more advanced than ours, has uprooted and cast out that atavistic emotion known as 'fear.'

At the precipitate panic and flight of over a hundred persons on the first morning—(when all X wanted was to get into communication with them)—the Martians were puzzled. However, they

bent to their work and completed most of it by the next day. When an armed party of humans approached they were overjoyed that at last they would establish contact with Earthpeople.

Imagine X's astonishment, when, after advancing a step to meet them, they fled in fright and shot their rifles at him! X was mystified and ran after them, which action caused the absolute rout of five hundred soldiers and ten thousand civilians.

When the bombardment started X and Y tried to drag Z inside the ship but the imminence of destruction to the three of them caused them to save two robots at the expense of one. It was quite by accident that they entered Chicago but curiosity led them onward as far as the Loop, where frantic motorists killed one another in their childish frenzy to save their own paltry necks from an imagined fear. They then abruptly left Chicago, which X tells me is a pitifully tiny city compared to those of Mars, and decided to see as much of earth as possible.

The determined air attack decided them to separate for a better chance to survive the fury of the queer Earth-beings, whose intellect was so low that they could think only of battle when they saw something beyond their ken. Y got his robot as far as the Pennsylvania borderline before a certain clever general ambushed it and blew it to a million worthless pieces, little realizing that he had in one mad moment destroyed a lifetime of work by a being ten times more intelligent and worthy than himself.

It is not for me to judge or to condemn as to the manner in which the authorities acted when the Robot Aliens confronted human eyes. But I think that the mere reading of these facts will bring a flush of shame to many a man who had something to do

with the welcome accorded our ambassadors from Mars.

Nevertheless X says that he is glad he finally came into communication with earthpeople and that he hopes much interchange of information will take place.

All technical questions will have to be left in the air at present till we are able to teach X the intricacies of our language. After all he knows as yet less of the language than any ten-year-old on Earth—which is the best I have been able to do in two months.

At the first request from the authorities I will turn over the Robot Alien to the scientists who will be able to do far more than I have in the matter of interchanging thought. But they must have patience, for communicating solely by writing is laborious, especially when *one* subject must be taught the meaning of each new word, sometimes by lengthy processes.

With greetings from X on Mars, I end this brief work.

BERT BODELL pointed dramatically skyward as he looked around the group of young boys and girls collected about his 'scope.

"Here comes Mars! Now let me adjust the clock and point the 'scope and then we'll all take a look."

This done, one after the other they peeped through at a small lumpy orange in the sky; some had to be dragged away from the eyepiece.

One girl's voice came awed from the darkness:

"Who'd think it possible for those funny things to come from *away-y-y* up there!"

* * * * *

"So I just stood there kinda fierce-like," said Lieutenant Arpy for the 864th time, "an' looked back at it. The thing was chilly to look at but it didn't *really* scare me. You don't believe the papers, do ya, Murphy, when they says everybody ran? I'm telling ya, so help me Hannah, I

stood there all the while!"

Murphy rolled a haggard eye at the clock. Two a.m. and he hadn't had a wink of sleep yet! In fact he hadn't had much sleep on night duty at the switchboard any more since the meteor had landed.

Lieutenant Arpy started version number 865 . . .

* * * * *

"Now, I had a suspicion all the time, Peabody, that those Robot Aliens were from Mars. Of course, I didn't say so in my interview because I hadn't quite decided at the time and thought it better to make it general. But if I'm not mistaken I was the *first* to even suggest an extra-terrestrial origin for the Robot Aliens. Wasn't I, Peabody?"

"Yes, Professor Honstein. By the way, sir, you speak tonight at the Astronomy Conclave on the subject of 'The New Orbit of Pluto.'"

Peabody was the forgetful professor's faithful Boswell and memorandum pad. Such reminders as this he had just made were absolutely necessary in the savant's haphazard life.

"Oh, tut, tut, Peabody. 'The New Orbit of Pluto' be hanged! I am going to speak tonight to my brother astronomers, yes, but not about Pluto. I shall speak, Peabody, on my personal experiences with the Robot Aliens! We must not forget that I was the first to suggest that they came from extra-terrestrial regions."

* * * * *

"Confidentially, though," whispered Captain Pompersnap to his ogling relatives, "I myself saw the folly of attacking the Robot Aliens without first ascertaining if they had any belligerent tendencies! You know, we men of the Army must obey our superiors without question, mentioning no names!"

His manner told much to the listeners, who one and all thought his actions had been above reproach.

At the same moment, the arrogant Major Whinny was subtly hinting to

a group of fellow politicians that higher authority had also misled him.

Under similar circumstances, Colonel Snoosharp pointed an accusing finger at Washington.

Secretary of War Rukke and the President volubly agreed that "misinformation from Fort Sheridan" had caused the war-action on peaceful ambassadors.

A week after the work called *The Robot Aliens* was published, a mob stormed the Miller mansion at Owensboro, dynamited the last Robot Alien to nothingness and burned Frank Miller alive. Their reason—(later published)—stated that Frank Miller was a Frankenstein who had loosed his irresponsible brain-children on a peaceful world and then attempted to cover his

malign sin by concocting his cock-and-bull Mars story.

Since he had always been a decided recluse, not given to associating much with society, the mob had no trouble in believing he had always been a secret experimenter and had "made" the Robot Aliens in a spell of madness.

Of the storm of controversy and denunciation which that hideous action aroused, of the bloody but short civil war that followed, we will say nothing. But we will add that Frank Miller is only one of many geniuses who died martyrs to their enlightened beliefs. People of reason and high intelligence admit that some day Mars will again send proxy ambassadors and vindicate his memory.

After all, "civilization" on Earth has only begun.



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The girl walked into the nimbus of white flame

EXILES OF MARS

By **FRANK K. KELLY**

Men of Earth and girls of the Red Planet face a desperate horde of savages on a Martian desert!

THE sun sank slowly down beneath the crest of razor-backed hills, its last long rays spilling out over the desert in a golden flood of light. Great piled dunes of scarlet sand took up the faint crimson beams and cast them back and forth

in flashing cascades of eery brightness—they faded, vanished. Night, sudden and complete, dropped with soundless speed over the desert.

Armiston made a savage motion of despair, and tore his eyes away from the bleak scene. He turned,

walked away from the huge glassite dome-port set like a great round eye in the smooth black metal of the tower wall.

His glance swung over the stark bareness of the tower rooms; the little stellite-glazed table; the five stiff-backed, metal-bound chairs. All of it sterile and dead as the desert outside, typical of the grim reality of the Tower Station, sole supply of the eca-radium that was man's greatest weapon in the never-ending fight against Cancer Four.

Armiston's eyes caught the straight taut figure, still standing beside the great dome-port, and tightened with sudden bitter anger. "Good heavens, R. G.! Quit standing there with that accursed grin of yours! You can't—like this! It's driving me mad!"

The older man turned sharply from the lookout port, sudden concern in straight grey eyes. His hand caught Armiston's shoulder in a grip that made the younger man wince.

"Cut that. Come out of it! I know how you feel—but it's too late now, Bob. You should never have come here. Why did you?"

"I was a fool, R. G. It was a woman, of course. In Korna. I thought I loved her—I thought there was nothing left for me after she—tired of things. Nothing except this. So I volunteered."

"I'm sorry, Bob. I wish there was some way I could send you back. But I suppose you know that once here—always here."

The bitterness and despair came back behind Armiston's eyes. "I know. The thing's monstrous! Why do they condemn us to *this*? It's inhuman!"

"No," Weber said unwaveringly, "it's very human, Bob. It is for all humanity—on whatever world it may be. Have you ever seen a case of Cancer Four? Then you know what I'm talking about. Eca-radium, sealed in capsules of entonium-isotope, is the only hope, once you've

got—*it*. With eca-radium, you live—without it, you die an undescrivable death. That's why we're here, Bob, just four of us. The Council would condemn no more to certain death. And no more are needed with the equipment and the Guards to help us. You understand, Bob?"

"Yes," Armiston said slowly. "What happened to the man before me?"

"He lost his grip. Tried to get away. They caught him before he'd gone half a mile. Do you want me to tell you any more?"

"No," Armiston said quietly. "No. I understand what you mean—perfectly."

AT THAT instant a bell tinkled musically in the wall behind them. A panel slid back into smooth metal, revealing a square of smooth vibra-screen. A man's face sprang with startling suddenness out of the vague shadows—a narrow, aquiline face with grave luminous dark eyes. The man spoke, his voice husky.

"Greetings, R. G. You two're on. Come down on Car V-Seven. Number Eight's cut off for a while—Council orders. I think something's up."

Weber nodded slowly, his face grave. A sudden uneasiness rose behind his eyes. "What have you been running, Ta?"

The other glanced at a narrow strip of metal fabric tape in one black-gloved hand. "Ninety tubes AC-Nine per minute. Other stuff running all the way up to two hundred. Things must be bad back in Korna."

"Yes. They must be." Weber shuddered, remembering the carnage of the epidemic of Cancer Four three years in the past. "We'll be right down."

Armiston forced a tight smile. "I saw that too, R. G. You needn't worry. I'm not going to crack up—for awhile yet."

Weber grinned. "That's the talk I like to hear from you, Bob! Let's

go! While there's life, there's hope!"

"Yes," Armiston said. "Yes. Except here."

Weber said nothing more. He pressed a stud in the polished metal of the wall. A panel opened soundlessly, revealed the softly lighted interior of the lift.

They stepped in together. They sank swiftly downward. At the bottom a second panel opened from the smooth wall of the lift shaft—opened into a narrow airtight box of a room lined with doubly-thick coatings of black insulating metal. Ungainly metal fabric suits lay on narrow benches against one wall. Beside them perfectly fitting masks of dull crimson huddled shapelessly.

Armiston and Weber climbed into the suits in silence, slid the scarlet masks down over their heads, buckled connections fast—then surveyed each other through the translucent substance of the red metal fabric. They looked like a pair of weird metal monsters, hooded over with the scarlet masks.

Weber went to the vibra-tooth inset into the opposite wall, and angled for visual connection with Ta Rigo, the man who had summoned them. Presently he answered, from a dim booth in the cavernous vastness of the generating room. He showed long teeth in a white smile, brought his sister, Ona, into view for a flashing instant, waved gaily at Weber.

"All well, R. G. Come out."

Inexplicably as always, Armiston's body was shaking. A sudden revulsion swept over him. Beads of cold sweat broke out on his face. Then he glimpsed, just for an instant, the bravely smiling oval of the girl's face—and fear left him. If this little Martian girl could stand it, he could.

WEBER pressed a stud in the thick metal wall of the room; a great panel opened before them, disclosed a narrow chamber, triply reinforced by layers of the black met-

al—the entrance-lock! Together Weber and Armiston stepped into the lock. The panel closed silently after them.

After an instant the wall before them seemed to fade away. The two men crossed swiftly over the threshold of the lock, and found themselves standing on a narrow catwalk, staring down into the Room of Rays.

Armiston stared, as always, with fascinated wonder. His eyes swept over the towering masses of whirling, clicking machinery, found at last the things upon which all this vast activity was centered—the ray tubes!

Towering masses of fused quartz, ranged in two great ordered circles about the central generating chamber, the tubes lanced upward into the dimness of the roof. Constant flame, the white coruscation of 20,000,000 volts bridged the gap between the glowing hot points of huge stellanium electrodes.

They poured a scintillating cascade of power over into the central chamber of the whole vast system—whirling electronic streams, bombarding with terrific force the heavy atoms of the ectoranium in the center of the chamber.

All that vast outpouring of energy, gathered from the sun-mirrors on the desert above into the photocells, poured out upon the great block of blue-green metal that lay in the middle of the central-chamber—pure ectoranium, element 194, broken down by the titanic action of the electron stream into precious pools of eca-radium, most valuable derivative of radium!

Trickles of glowing white liquid dropped from the great block of metal, flowed sluggishly out through narrow vents of triply-braced zinconium into narrow tubes of crimson metal.

Laboring robot arms came down from the dim bulk of nearby machines. They caught the tubes, sealed them white-hot, thrust them swiftly into the openings of repulsion-tun-

nels, to be caught up into the never-ceasing stream of tiny projectiles hurtling half across Mars to the receiving depots of Korna.

A sudden thrill rocked Armiston's soul. None gave better service to the worlds than these four bitter exiles who labored in the subterranean pits of the rays, submitting uncomplainingly to the slow rotting death of ray-infection! In a glow of vicarious martyrdom, he swung down the catwalk by Weber's side, took his place beside the older man at the great central-control towers. He was even able to wave gaily at Ona as she passed him, tired and pale, going down to the entrance lock. The girl smiled back tremulously. Then she was gone.

Weber, sitting three feet away from him, eyes fascinated by the rhythms of the great mechanisms scattered over the room, each a smoothly-working cog in a vast whole. Weber, with a queer sensation of ecstasy, realized that the rays were conquering him.

He wondered if, after all these years, he was going mad. What did the Martians call this vast bleak desert whose heart held the room of rays? *En-o-Dah—En-o-Dah*, the Desert of Lingering Death. He glanced across once at Armiston, sat up sharply, alarm in his eyes.

Armiston was breaking under the constant onslaught of the rays, even though his time here was measured in days, Weber's in years. He'd have to do something about that. Why was it so hard to think?

HE SHOOK his head sharply to clear his brain, unstrapped himself from his control-board, glanced down once at the quiet surface of his switch panel, hurried across the narrow catwalk between the control towers. His metal gloved fingers closed hard on Armiston's shoulders. He shoved his face down close to the younger man's.

"Come out of it, you snivelling fool! You've got to stick! I won't

let you go mad! You don't get out of things as easily as that!"

Armiston waved a hand feebly. "Go on back. I'm—right as rain, now. It—just comes on me in—waves. Gone now."

Weber stared at him a minute, then gave his shoulder a fierce grip and was gone. Nothing else happened on their shift after that.

A bell rang in deep sonorous tones, its throbbing reaching even through the hollow thunder of the machines in the great room.

Armiston forced moist lips to split into a thankful smile. Shift over! He rose stiffly, stared out over the room, eyes fastened on the narrow platform, jutting out from the outward face of the entrance-lock.

The panel opened. Two black-clad crimson-hooded figures came toward them, laboring up spidery lengths of metal ladder.

Ta Rigo and Ona stood presently beside them, panting a little. Ta Rigo waved a gay hand. Nothing seemed to affect this tough-skinned keen-witted little Martian. But the girl looked tired.

"How goes it, my friends? Still ninety, R. G.?"

Weber nodded gravely. He was himself again—master of the insidious fear that lived in all of them.

"Still ninety. I'm afraid something's up in Korna. Ona, you look tired. Let me take the first half of this watch. You go on up with Bob."

The girl flushed indignantly. "No, no! I am not tired at all—really. I cannot let you do this for me, R. G."

He smiled at her, gave Armiston a little push. "Get on—both of you! It's not the first time I've taken double watch—is it, Ta, old friend?"

The lithe Martian grinned. "Indeed not. I am afraid, R. G., that you and I are a bit too tough to kill. Go on, Ona."

Armiston moved forward, pleading. "Please, Ona."

The girl laughed shakily. "Three against one—what can I do?"

Armiston caught her hand. The

two of them climbed past Weber and the silent Martian, vanished down the narrow ladder. Weber and the Martian watched until the panel of the entrance lock had closed behind them. Then a single silent glance of understanding passed between the two men.

Armiston said, "Ona, I am afraid. I think I am going mad."

They were in the tower room again, sitting opposite each other at the little metal table. The girl looked at him with wide luminous eyes. Her thin hand came out and touched his fingers.

"I know, Bob. I am afraid, myself—always. Even R. G. is a little afraid, I think. The brave man, Bob, overcomes fear."

Armiston raised his head and looked at her. For the first time he really saw her as she was, saw the proud litheness of the small body, the aquiline intelligent little face, the glorious crown of sea-green hair.

"That's so," he said slowly, dully. "You're brave, Ona. More than brave—beautiful. Have you ever heard that word before? It fits you."

She met his straight glance with half-troubled eyes. "Am I really beautiful, Bob?"

"You are," he said softly and closed his big hand over her small one. "I love you, Ona."

She drew back from him abruptly, terror in her eyes. "You should not have said that! There is no room for love *here*, Bob."

"There is room for love everywhere," Armiston said and came around the table. He caught her in his arms.

The soft tinkle of a warning bell separated them. The vagueness of the vibra-screen vanished. Slowly the image of the caller showed on the little glowing square. There was no face. There was simply a half sphere of glinting white glassite, through which was dimly visible a gently throbbing mass of grey jelly-

like substance.

The whole was mounted on an ungainly tripod-shaped metal mechanism, capable of swift movement upon the flexible metal tentacles it called legs. A metal man, one of the increasing thousands beginning to throng Mars—once a being of flesh and blood, now a great brain mounted on metal. It was the last desperate resource of a dying race.

THERE was a bright-glinting object inset into the stark whiteness of the head dome and Armiston recognized the thing as M-Seven, Commander of the guard of metal men that surrounded the Tower Station—for protection against the hordes of desert vandals. Armiston had the uncanny sensation of a voice speaking in his brain:

"M-Seven, Commanding Twelfth Guard Squadron, reporting. I have—news."

The girl pushed Armiston aside. "Of course. Use lift V-Two, Commander. At once. We will await you."

A bell rang. Slowly, a long panel slid back into the metal wall and the metal Guard untangled his grotesque body from the crowded little lift car and came into the room, stood swaying gently before them. The girl snapped a question:

"There is—trouble?"

"Yes, High One. A raiding party of desert savages attacked the Guard Station at Zee-Boma; they carried it—but not before warning had been sent out. The vandals have taken a course directly across the Fire Mountains above us. No danger for here but the Twelfth Squadron may be ordered to pursue. I thought I would warn you."

"You did rightly," the girl said. She stood a moment in silence, thinking. Curiously, Armiston did not question her right to command.

"We will go with you to the signal-room," the girl said suddenly. "Come, Bob."

Armiston followed without ques-

tion. The queer ungainly thing before them swayed on its flexible tentacles, made an odd mechanical bow. A tentacle whipped out and pressed a stud in the wall, summoning the lift.

The panel opened in the wall before them. The metal Guard motioned with a tentacle that they were to go down first. The car sank.

Below a panel opened again into a metal wall and he and Ona came out into the dimness of the signal-room. There were two of the metal Guards here, working silently at giant vibra-screens and audio-detectors, sending and receiving, forming a link in the world-girdling chain of Guard Stations. In one corner the helio apparatus was silent and unmoving. It was not often used, except in cases of extreme emergency.

They stood near the helio apparatus, staring out through the round opening of a small glassite port. Night, sudden and complete, had fallen over the desert. In here, dim and muted by distance, they could hear the soft whisper of a rising wind—a thin, high wind, howling the dirge of dying Mars. A shock stabbed Armiston's brain. There in the distance—had he seen that pinpoint of sudden white light cutting the velvet blackness—or was he going mad?

He was not mad. The girl had stiffened suddenly beside him, slim body taut, eyes intent upon the distance. She turned, flung a stream of words at the metal Guard Commander. He came closer, shoved Armiston impatiently aside. The grey substance of the brain was palpitating, stirring—suddenly Armiston was very sick, the room whirling before him.

BEFORE his gaze the thing had turned, twisted—and projected out of the quivering protoplasm of the brain an eye! Armiston turned away. The brain was throbbing again:

“Yes, High One. There is someone, something out there—signaling—using Guard Code. I can read parts of the message. I can get all of it now.”

The girl gripped Armiston's shoulder with painful force. “What does it say?”

“It says, ‘Guard Station, Aie-Tau. To all Guard Commanders, Sector V-Four, South—attacked by raiding party of desert savages. Leaders maddened by thirst—great numbers—more coming from hills—afraid can't hold out much longer. Using last charged—V-Tubes—now.’ The message ends, High One.”

Armiston met the girl's eyes. There was fear in them. “You are afraid, Ona. Why?”

She looked at him queerly. “I am not afraid for myself, Bob. But there are so many depending on us. So many who will die, horribly, without the tubes. If anything happens—”

He understood—and for the first time uneasiness seized him. They were almost defenseless and if the Guards left. . . .

“What could happen?”

The girl shrugged, eyes uneasy and worried. “I don't know. Nothing, I suppose. But if the Guards go—”

Armiston looked across at the queer ungainly metal thing, felt sudden respect. He asked quietly, “You will have to go?”

The brain quivered. “Yes. It is the Code of the Guard, High One. I do not like it. But I must obey. I will leave two here to guard you. You will be safe.”

“Of course we will be,” Armiston said, looking at the girl.

The girl nodded slowly, her eyes troubled.

“I hope so, Bob.”

The metal Guard Commander was giving swift orders. The helio apparatus began to swing and flicker, swing again, flicker again, back and forth. And out on the vast reaches of the desert small points of white

light flickered in answer from night patrols.

Slowly, in ones and twos and threes, the patrols trickled in from the desert, formed in ordered rows below, at the ground-entrance of the tower. The Guard Commander snapped terse commands at the two Guards in the signal-room. He turned, stood before Armiston and the girl.

The brain quivered.

"I must go now, High One."

The girl nodded, her straight eyes facing the ungainly metal bulk. "Yes. We will be safe until you get back, M-Seven. Good hunting!"

Armiston and the girl were silent and abstracted, going up to the tower room in the lift. Neither thought of sleep. Swiftly Armiston donned heavy metal armor, slipped the crimson mask down over his face.

Somehow his fear was gone.

They stepped out together onto the catwalk leading down into the vast room, clambered past the jutting bulk of clamoring machinery, moved upward slowly into the control towers.

Weber flung them a searching glance. His hands played swiftly over a narrow keyboard inset into one corner of the giant switch panel, locking the automatic controls. Ta Rigo did the same.

"What is it?" Weber demanded. "Something's up?"

"Yes," the girl answered. "The Guards have been called away. There's been an attack to the north of us—desert vandals. M-Seven left us two Guards. R. G.—I'm afraid."

Weber said slowly, "So am I. Something's doing in Korna. And if that weren't enough to worry us we get *this*!"

"What are you running?" the girl asked, eyes suddenly widened. Weber answered tersely:

"Ninety-five AC-nine every minute. We'll leave control to the automats for awhile. We'll have to. I've got to talk to Korna."

TOGETHER they crowded into the lift car, rode upward swiftly to the signal-room. The panel closed behind them. Weber shot a quick glance over the dim outlines of the great room, took in the steady, certain movements of the two metal Guards in one corner, rested on the huge bulk of the darkened center vibra-screen.

He swung on the three behind him. "You'd better stand by the lookout port. There *might* be something to see. Ona, you have keen eyes. Use them. I'm calling Korna."

Weber strode forward, flung himself impatiently into the narrow control-seat of the great screen, worked rapidly at banked rows of control studs. He met the keen black eyes of Travisgane, Councillor in charge of Communications. Worried lines were carved deep into the Councillor's high white forehead.

"Weber! Thank God. I've been trying to get you for hours! Anything wrong?"

Weber shook his head. "Nothing definite. But M-Seven's been called away. A raiding party's struck across the Fire Mountains. All Guard Squadrons in this sector have been called out."

The Councillor did not look as if he were even listening. The half-mask of impassive restraint dropped away from him.

"There's trouble enough here, Weber. Gods of Space—the horrors I've seen this last hour! Weber, it's up to you—and Ta Rigo. We'll go under if you can't keep up that flow of ninety AC-nine per minute."

"You don't mean—you can't mean—another wave of Cancer Four?"

The Councillor nodded wearily. "But I do. Look."

The screen blurred, swung, flickered—and Weber stared with sickened eyes at a scene of unthinkable horror. Ward after ward of the great Hospitalization Centres in Korna was packed to overflowing with warped travesties of the human form.

The screen blurred again and presently the Councillor was back, eyes grim and tortured. "It's come again. You've got to keep supplying us with AC-nine. I won't think of what would happen if you fail—even for an hour."

"I see," Weber said in a hushed voice. "We won't fail, Councillor."

He cut off the screen controls and swung out of the operator's seat, stood up, turned. The girl was beside him, face pale as death. She swayed, toppled. He caught her, put her on her feet again.

"Steady on, Ona. We can't fail now."

"No," the girl whispered softly, "No." She made a sudden gesture toward the lookout port, where Armiston and the Martian stood frozen, staring out over the desert.

"Out there, R. G. We saw something."

Weber shoved her aside, hurried to the port.

JUST topping the crest of scarlet sand dunes silvered by the light of the racing moons, a vague, dark, rippling mass was flowing rapidly over the desert, sweeping down upon the tower. Weber felt despair crush him. Vandals! A raiding party of desert savages, maddened by thirst, coming to attack them!

He swung suddenly away from the port. Then he caught Armiston and the Martian in a savage grip.

"Come out of it, you two! We can't let them take us! I promised—"

Armiston stared at him helplessly. "But what will we do? What can we do?"

Weber's face was a granite mask of determination. "We'll fight," he said fiercely.

"We'll fight with what we've got—and beat them. We've got to."

The girl moved suddenly, spoke. "An idea, R. G.—why not use our insulation-armor, when we go out there to meet them? They'll find it hard to reach us through inches of

entonium! And we can use the projector."

"You've struck it!" Weber cried exultantly. "And we've got our two Guards here to help us!"

He swung, faced the two metal men, who stood impassively waiting in one corner of the room. "We're going to fight, my friends. Out there. We four will handle the projector and you have your hand weapons. Use them."

The brain of the nearest rippled in sardonic approval. "Ai! May we find—good hunting!"

A little band of six figures crawled across a molten sea of rippling desert. In the lead were four metal-armored heavy-moving beings in human form, fingering the multiple controls of the glimmering, sharp-nosed ionic projector. Following on swift, lithe tentacles of metal came two ungainly monstrous things, topped by glassite cases in which rested two naked throbbing brains.

Awaiting them on the crest of the dunes was the enemy—a silent horde of savage creatures, begirt with fragments of metal armor—blunt-featured, heavy-browed—fingering crude flame-belching weapons of Earth's iron and steel. Here and there among them a compact little heat-gun, taken by battle from some Guard Station.

Savages, Armiston thought, climbing up to battle at the side of the tight-faced girl—savages of a strange planet, warring with madmen gone berserk in defense of their beloved science, fighting to uphold a dying civilization.

A heat-gun chuckled suddenly on the crest of the sand-hills, sent a sobbing stream of incandescent fire pouring down over the dunes. The six metal-armored figures walked on with contemptuous strides. One of the metal Guards lifted a tiny silver capsule in a lithe tentacle—hurled it full into the heart of the crouching horde on the hills above. An atomic bomb!

The capsule burst. Silver-and-

green fire seemed to mushroom up out of the billowing waves of sand and brush away with hungry fingers a dozen ranks of savage figures. A great gap opened in the lines of the raiders. They fell back a little, dazed and stunned by that awful concussion.

Slowly the gap in the dark mass above was filled. And suddenly pandemonium burst over the desert. The horde broke up into a billowing, howling mass of madmen, poured down in incessant streams upon the six who stood back to back in the center of the maelstrom.

THREE times the hungry waves swept over and half engulfed the six—three times they were hurled back again in dismembered bloody fragments—impaled on the spitting electron stream of the projector.

The third time was the last. The horde suddenly retreated in wild rout.

Victory—but at a price. Ta Rigo was gone. Armiston was standing dazed beside a great gaping crater in the sand, looking down at the fused mass of what had been two metal men, once throbbing with tenacious life.

Ona was crumpled on the sand, sobbing over the tortured fragments of a man's metal armor. Weber brought her to her feet, shook her gently.

"Carry on, Ona. It's what he would have wanted you to do."

"Yes," the girl said dazedly, the light gone from her eyes. "I'll—carry on."

"Good girl!" Weber said huskily, and turned away to hide the sudden moisture in his eyes. Armiston fought off a mad desire to scream, laugh, do anything to relieve his insufferable tension. He caught the girl's arm on the other side from Weber and with the girl between them they made it slowly back to the tower.

They took the lift up to the signal-room, stepped across the thresh-

old of the dim chamber in silence and in silence took places by the lookout port, staring out over the desert. The shattered ranks of the savages had already begun to reform slowly. Thirst, Armiston thought suddenly, is a mighty welder.

Weber made a little inarticulate sound and toppled forward on his face. Armiston caught him up and laid him out carefully on a narrow bench. He felt under the light tunic. There was a charred gash under his left armpit, cutting across the heart—a heat-beam had pierced his armor, and the wound had gone unnoticed in the fever of the battle. The girl met Armiston's eyes.

"Bad?"

"Very bad, Ona. We can make him comfortable—"

Together they cleansed and covered the gaping wound, chafed Weber's pale cheeks with cold, nervous hands. He came around, opened his eyes slowly.

"Tell me, Bob—and don't be a sentimental fool. How bad is it?"

Armiston looked at him with unwavering eyes. "You asked for it. I'm afraid you're through."

Weber fell back on the bench. "And I promised, Armiston! Are *they* coming back?"

Armiston was hardly listening. His eyes were staring through the thin glassite of the lookout port. Out on the desert a white pinpoint of light was beginning to wink-sardonically—a sending helio!

"Ona—look!" Armiston said suddenly, tensely. "Over to the right a little more. Do you see it? A helio. Sending. Can you read the message?"

The girl strained forward, eyes tense upon the distance. "Yes. It says, 'Commander, the Tower. There is no escape for you. M-Seven was victim of a hoax. It was our signals he caught. He is too far away to return in time to save you. We offer you a chance to live. We know you have much water. Give it to us and

you live. Refuse and we take it. Answer at once."

A sudden silence fell over the three of them. Weber's eyes opened. By a supreme effort of will he brought himself erect on the bench, met Armiston's eyes. "Armiston, can you handle the helio?"

He nodded.

"Send this message—'You are wrong. We have only a little water. Barely enough for ourselves. And there are many who will die if we die. We have nothing for you.' Send it!"

Armiston shrugged, looked across a long moment at the girl, went slowly to the helio. The great mirrors began to swing and flicker.

FAR out on the desert the white point of answering light leaped up again.

Armiston, very white, said slowly, "They give us five hours to reconsider. After that they attack."

And then the girl spoke, her voice a dry whisper. "But we will stop them. R. G., listen. I have a plan."

Weber's eyes opened again. He fixed the girl with a hot, impatient glance.

"Quickly, Ona! I have not long. What is your plan?"

"This," the girl said slowly and she did not meet Armiston's eyes. "One of us will take that suit of insulation-armor there, put it on. We will charge the projector directly from the storage cells of the generating room in the tower. It is dangerous, I know, but it is the one way left to us. Charged with the power those great cells will give it, it can destroy all of the enemy. One of us will take the projector and go out to meet them."

"No!" Armiston cried in horror. "No! You're mad, Ona!"

Weber swung on him fiercely. "Quiet, Armiston! She is right. It is the one way out. I will take it, of course. Get the suit."

Armiston helped the girl pick up the heavy suit, bring it near the

bench. Slowly Weber rose, swaying on unsteady feet. Armiston extended a quick arm.

Weber struck it down fiercely. "No, man! Can't you see? I must do it alone." He gasped suddenly, toppled face downward to the floor.

The girl was the first to reach him. She straightened up slowly as Armiston caught her shoulder.

"He's gone?" the man asked and read the answer in her eyes.

Armiston spoke fiercely, "I've got to take his place. We've got to go through. The projector's ready?"

"Yes," the girl said slowly. "We have an hour before they attack."

"I will go then," Armiston said, looking at her for a long moment, drinking in the vision of her loveliness. "You know what you have to do when I—wipe them out?"

The girl said in a flat dead voice, "I am to call Korna and have them send relief at once. Then I am to lock the automats and hold out until the relief comes. Is that right?"

"Yes," Armiston said, very close to her. He caught her for a long instant in a close embrace.

"That's goodbye, Ona. Remember—I loved you."

The girl choked back a dry sob. "Goodbye—Bob. Remember I said there was no room for love—*here?* I was right."

"No," Armiston returned slowly, a glorious vision rising in his brain. "You are wrong."

* * * * *

Armiston strode rapidly over the desert, the heavy little projector held easily before him. A curious lightness and freedom filled his brain. At last he was free from fear. And that was all that mattered.

He topped the crest of a sandhill, came slowly to a stop. Almost upon him, gathered in compact masses, the hordes of the freedmen crouched silently, watching him with eager eyes.

Calmly Armiston crouched against

the faint glow of the racing moons above, his cool grip tightening about the squat bulk of the quivering projector.

He pressed the studs. Great bursts of searing white light leaped out all around him, swept out in a vast half-circle that engulfed the horde in an instant dissolution of flaring force, rebounded with a thunderous concussion upon Armiston's metal armor—and exploded in a searing wave of white flame. Armiston was gone.

Behind, high up in the towering silver bulk of a great tower, the girl watched with fascinated, horror-stricken eyes, her face pressed hard against the glassite of the lookout plate.

Moving like an automaton, she crossed the floor of the signal-room, sat down at the controls of the vibrascreen, and began to build up visual and audible connection with Korna. The face of Travisgane, the Councillor of Communications, looked out at her with questioning eyes.

"Ona! What is it?"

The girl looked at him dully. "They are all gone except me. They are all gone. All gone."

The Councillor said frantically: "Ona! Ona! Listen to me! Tell me what has happened! Weber and Armiston?"

"Dead," the girl said in a flat voice. "They're all dead except me. Send relief as quickly as you can. I am locking the automats. You've nothing to fear; they will supply you until you can send out some—

fools to take our places."

"Yes," the Councillor said in a stricken voice. "What happened?"

"A trick," the girl muttered, "A trick to get M-Seven away and then attack here. They didn't win, though. Couldn't beat R. G.—and Armiston killed them all before he died."

"They were brave men," the Councillor said softly. "We are winning the fight here. Carry on, girl!"

The girl looked at him a little stupidly. "You'll send the relief?"

The Councillor nodded. "Of course. In five hours."

The screen went dead. Slowly the girl got up from the control-seat and went to the lookout port, stared out at the bleak cruelty of the desert. The desert had won. The desert always won.

After a long time a sound invaded the silence of the room—distant, muted, the rising thunder of a fleet of rocket-ships slanting down over the hills. The relief.

The girl watched until the roaring ships were dimly visible silvery blobs on the horizon. Then she rose slowly and went up in the lift to the entrance-lock of the Room of the Rays—and entered, without armor.

Slowly she moved down the narrow catwalk, reached the control towers. She passed them by unheeding and walked grimly, doggedly, into the nimbus of white flame that lived and grew about the surface of the tubes.

Outside a thin wind rose over the desert, whispering.

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